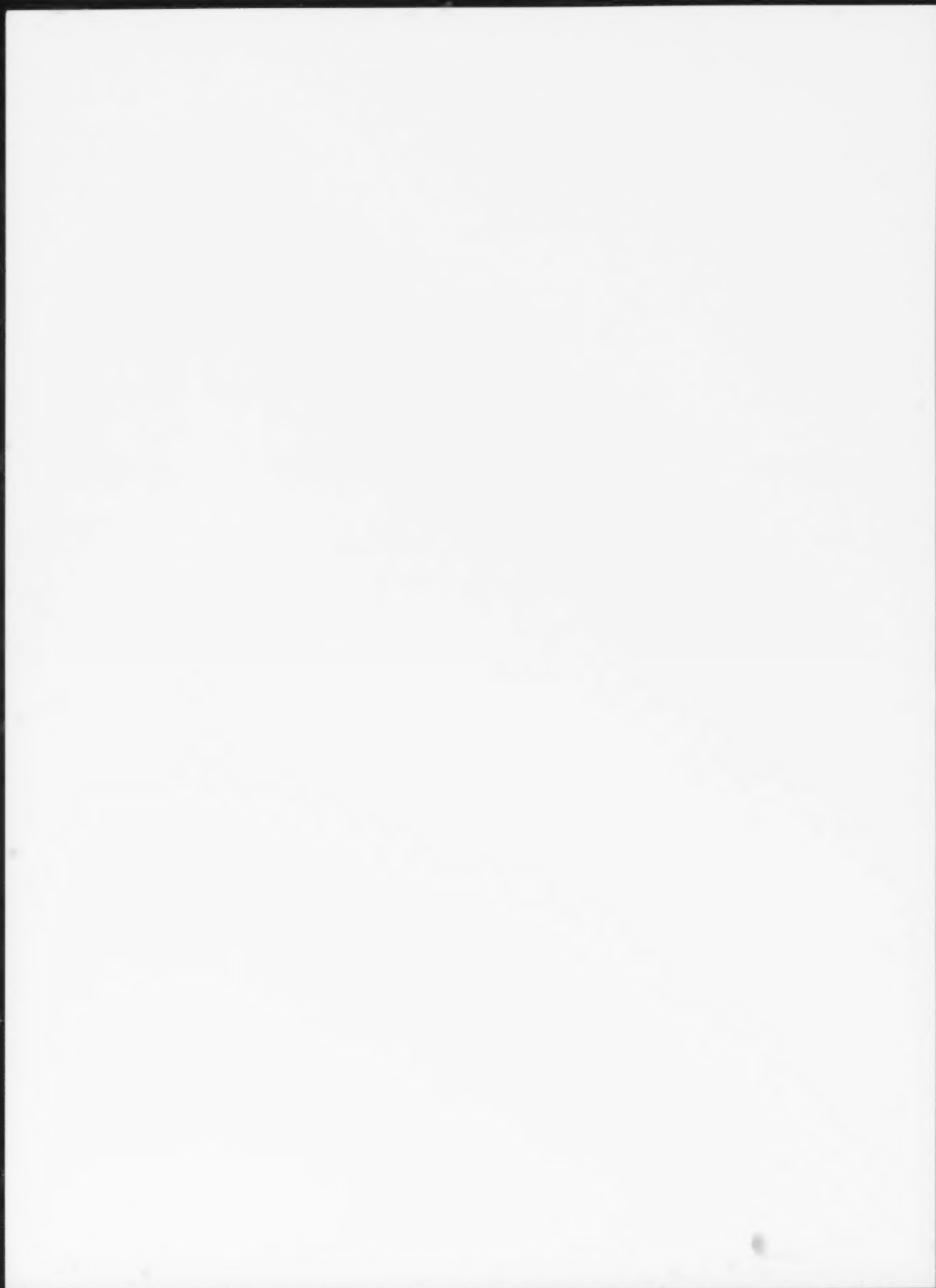# Enhancing the Continuum of Care

Report of the Avoidable Hospitalization Advisory Panel

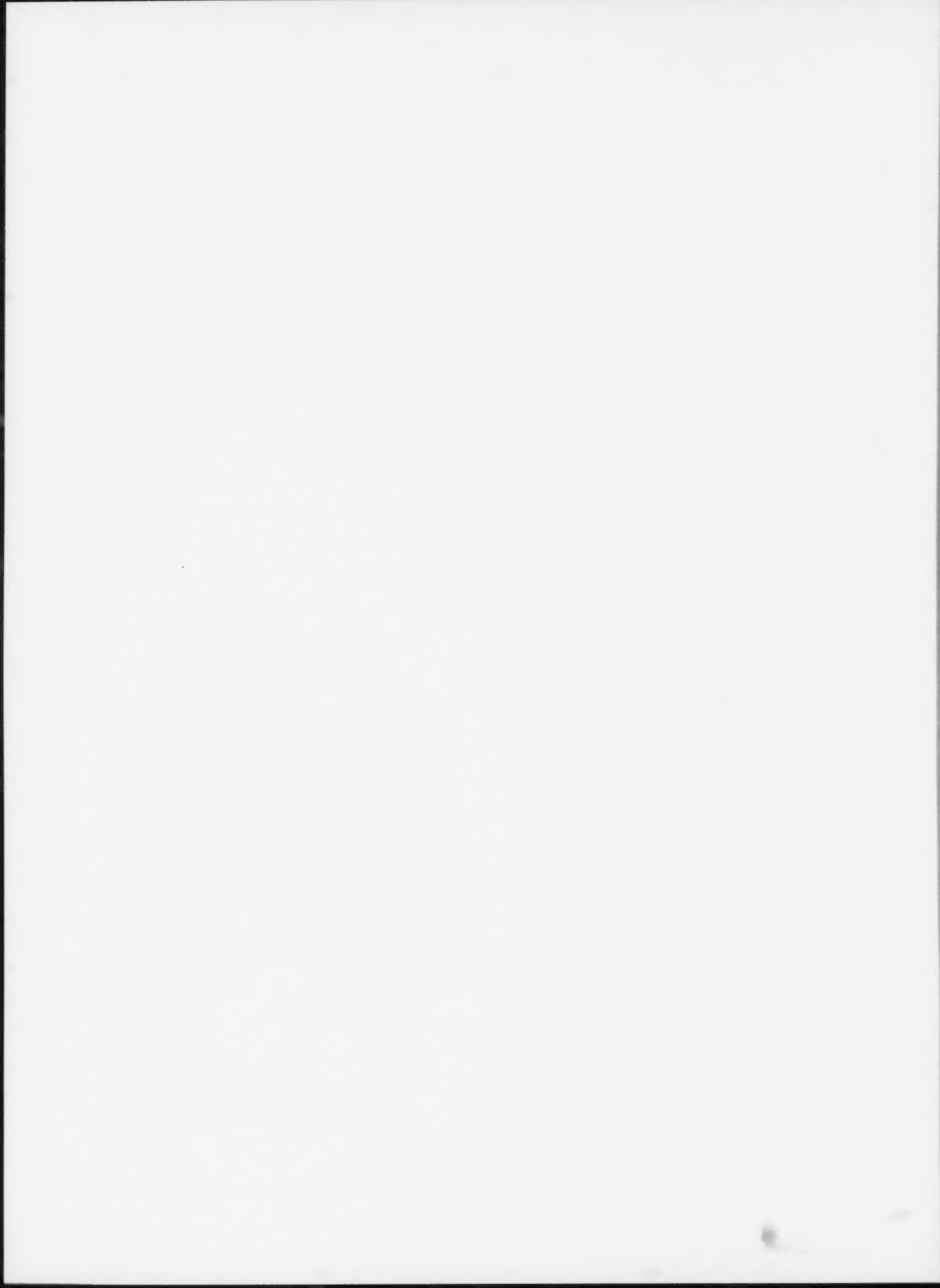Submitted to the Ministry of Health and Long-Term care

November 2011

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Executive Summary

Executive Summary

The Excellent Care for All Strategy (ECAS) aims to improve the quality and value of the health care received by Ontarians. Improving quality of care and sustainability of the health system by reducing avoidable hospitalizations is a key area of focus of the strategy. System experts at a May 31, 2010 Advisory Forum on Avoidable Hospitalizations recommended initial efforts to reduce avoidable hospitalizations focus on safe, effective transitions in care to reduce readmissions to hospital, while building the system's capacity to increase the area of focus in subsequent years.

The Ministry of Health and Long-Term Care (MOHLTC) established an Avoidable Hospitalization Advisory Panel to provide advice and recommendations on appropriate measures, targets and timelines, validation of best practice guidance for Ontario and leading care transition practices in Ontario. The advice and recommendations of the Panel will inform provincial initiatives to support health service providers in providing safe, effective transitions in care to reduce avoidable readmissions to hospital.

Reducing avoidable readmissions of patients discharged from hospital is an important area for improving the quality and safety of health care and making more effective use of health care resources in Ontario.

Evidence indicates successful interventions used to improve care transitions and reduce avoidable rehospitalizations include several common elements. Effective care transitions incorporate better planning for discharge, improved communication between clinicians in different settings as well as between clinicians and patients, medication reconciliation and management when the patient returns home, patient and caregiver education, and timely primary care follow-up in the community.

Strategies to improve care transitions may require additional resources to reduce the likelihood of rehospitalization, so hospitals should screen patients with tools like the LACE Index (detailed in Chapter 2.2) to identify those at high risk of readmission and then target their efforts to these patients.

Improvements in care transition will require clinical and strategic partnerships across the health care system. Collaboration across organizational boundaries is essential for reducing poor outcomes.

A review of current policies and system constraints on improved collaboration, including funding formulae, should be launched in parallel with organizational and system interventions to improve care transitions.

A variety of small scale demonstration projects are underway in Ontario to improve care transitions. These efforts need to be fully evaluated to assess their impact and then tested in other settings in Ontario with differing resources and patterns of health care delivery. An "improvement collaborative" project that recruits cross-continuum teams from different parts of the province could test strategies for improving care transitions. Health Quality Ontario could lead such a project.

Efforts to improve care transitions need to be integrated into the current system without adding unnecessary complexity or introducing duplication. Effective screening of patients at risk of readmission, targeting additional services to these patients and improving communications between hospitals, home and community services and primary care providers will enable reductions in readmissions. The Panel's vision for an enhanced system sees higher quality care for Ontario patients and does not necessarily imply increased costs for the system as a result of these improvements.

Introduction

Introduction

1.1　The Excellent Care for All Strategy

High quality health care is important to every Ontarian. As such, the government has taken important steps to improve the quality of Ontario's health care system and make sure every health care dollar is used to provide the best possible care.

The *Excellent Care for All Act* (ECFAA), which received Royal Assent on June 8, 2010, strengthens the organizational focus on quality and its continuous improvement and puts patients first by improving the quality and value of the patient experience through the application of evidence-based health care. The Act sets out a number of requirements from health care organizations, including the development of Quality Committees and annual quality improvement plans. These changes will occur first in Ontario hospitals and then spread to all health care organizations throughout the province.

ECFAA also established HQO as the agency responsible for promoting and disseminating evidence-based recommendations, supporting health care providers in quality improvement and adoption of best practices, and reporting to the public on the quality of health care in Ontario.
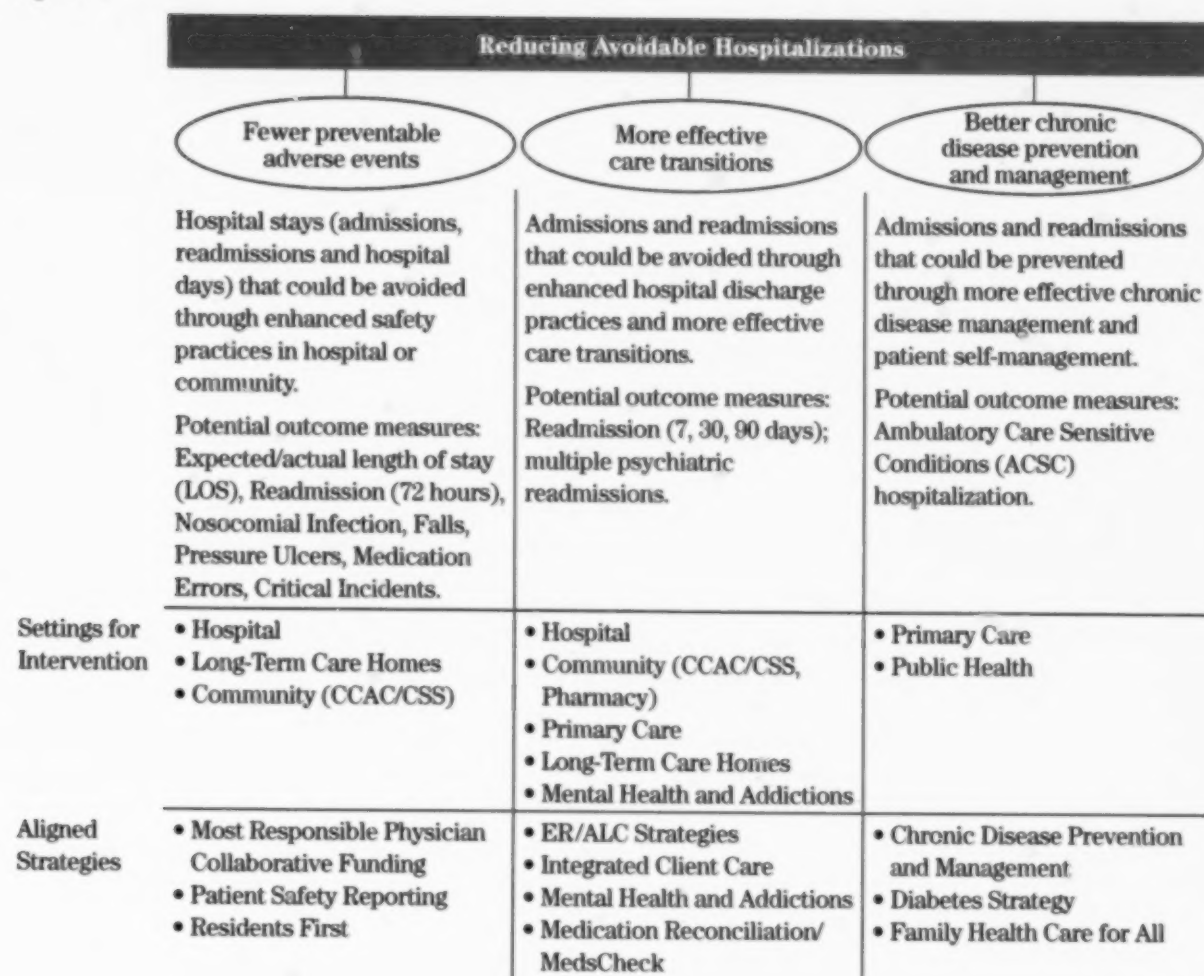
Ontario's ECAS is designed to improve the quality and value of the health care received by Ontarians. The strategy is based on four guiding principles: care must be centred around the patient to support his or her health; continuous quality improvement is a critical goal; policy, planning and payment must support both the quality of health care and the efficient use of resources; and quality care must be informed and supported by the very best evidence and standards of care.

1.2　Provincial Focus on Avoidable Hospitalization

As part of ECAS, the MOHLTC is pursuing provincial initiatives to contribute to system sustainability by improving quality of care, addressing gaps between evidence and practice and supporting evidence-based care. Reducing avoidable hospitalizations has been identified as an area of provincial priority in the ECAS, where improvements in quality of care for Ontarians are also expected to contribute to the sustainability of the health care system.

The MOHLTC held a Leadership Forum of clinical and health system experts on May 31, 2010 to discuss the drivers and patterns of hospitalizations in the province and to identify areas of opportunity for further work, areas where support for evidence-based care would improve quality of care, patient outcomes and reduce system costs. The forum focused on opportunities in three key areas: reducing avoidable primary hospitalizations, reducing avoidable hospital days, and reducing readmissions to hospital, as outlined in figure 1 on page 9.

Figure 1

	Fewer preventable adverse events	More effective care transitions	Better chronic disease prevention and management
	Hospital stays (admissions, readmissions and hospital days) that could be avoided through enhanced safety practices in hospital or community.	Admissions and readmissions that could be avoided through enhanced hospital discharge practices and more effective care transitions.	Admissions and readmissions that could be prevented through more effective chronic disease management and patient self-management.
	Potential outcome measures: Expected/actual length of stay (LOS), Readmission (72 hours), Nosocomial Infection, Falls, Pressure Ulcers, Medication Errors, Critical Incidents.	Potential outcome measures: Readmission (7, 30, 90 days); multiple psychiatric readmissions.	Potential outcome measures: Ambulatory Care Sensitive Conditions (ACSC) hospitalization.
Settings for Intervention	• Hospital • Long-Term Care Homes • Community (CCAC/CSS)	• Hospital • Community (CCAC/CSS, Pharmacy) • Primary Care • Long-Term Care Homes • Mental Health and Addictions	• Primary Care • Public Health
Aligned Strategies	• Most Responsible Physician Collaborative Funding • Patient Safety Reporting • Residents First	• ER/ALC Strategies • Integrated Client Care • Mental Health and Addictions • Medication Reconciliation/ MedsCheck	• Chronic Disease Prevention and Management • Diabetes Strategy • Family Health Care for All

(Table title banner: Reducing Avoidable Hospitalizations)

There was strong alignment and consensus at the Leadership Forum in a number of areas, including:
- Avoidable Hospitalizations is an important issue to focus on, but covers a very broad scope.
- Given substantial work and focus across the province already underway on reducing adverse events and improving patient safety within hospitals, safe and effective discharge and transition to the next care location to reduce avoidable readmission to hospital would be an appropriate initial area for provincial focus. The broader context of effective chronic disease prevention and management in primary care to reduce avoidable hospitalizations could be considered a medium term area of focus.
- Focus of these efforts should be on target populations, not specific conditions/diseases in isolation.
- Key populations of interest identified: first and foremost the frail elderly population, then those with multiple co-morbidities, clients with mental health issues and complex children.
- Specific targets should be validated through additional expert panel discussion.

One of the outcomes of the forum was a recommendation to establish an advisory panel to provide guidance to the province on initiatives focused on reducing readmissions and avoidable hospitalizations as part of the ECAS.

Materials related to the Forum are included as Appendix 1.

1.3 The Role of the Advisory Panel

The MOHLTC established the Avoidable Hospitalization Advisory Panel ("the Panel") in September 2010, with a mandate to:

- provide advice on the most appropriate measures, targets and timelines for initiatives focused on reducing readmissions/avoidable hospitalizations as part of the ECAS;
- provide advice on evidence-based practices that ensure efficient, effective, safe and patient-centred care transitions;
- provide advice on strategies for identification and selection of leading care transition practices in Ontario to be compiled in an inventory or "Living Lab" of innovative models of care that reduce readmissions/ avoidable hospitalizations;
- provide advice on local evidence criteria for leading practices in Ontario;
- provide advice on the scalability and spread of leading practices in Ontario;
- monitor the outcomes of care transitions initiatives, and assess their impacts on hospital readmission; and
- identify policy or systemic barriers and enablers to safe, effective and patient-centred care transitions, including funding policy, and funding incentives or disincentives.

The Advisory Panel Terms of Reference are included as Appendix 2.

The Panel was chaired by Dr. G. Ross Baker, Professor of Health Policy, Management and Evaluation at the University of Toronto. It included membership from multiple disciplines and across several health care sectors, including primary care physicians, hospitalists, nurse practitioners, researchers, pharmacists, academics, and LHIN and hospital administrators, to ensure that many provider and stakeholder perspectives were represented in the Panel's discussions, deliberations and considerations.

Members of the Advisory Panel

Advisory Panel Chair Dr. G. Ross Baker, Professor
Health Policy, Management and Evaluation (HPME), University of Toronto

Dr. Howard B. Abrams
Division Head, General Internal Medicine, University Health Network and Mount Sinai Hospital
Executive Director, Centre for Innovation in Complex Care

Dr. Chaim Bell
Chair in Patient Safety and Continuity of Care, CIHR/CPSI; Physician and Scientist,
St. Michael's Hospital and Keenan Research Centre; Adjunct Scientist, ICES

Paula Blackstien-Hirsch
Senior Director, Ontario, Canadian Patient Safety Institute

Dr. Glenn Brown
Head, Department of Family Medicine, Queen's University

Patti A. Cochrane
Vice President, Patient Services & Quality and Chief Nursing Officer, Trillium Health Centre

Dr. Fionnella Crombie
Chief of Family Medicine, St. Joseph's Healthcare, Hamilton

Stacey Daub
CEO, Toronto Central Community Care Access Centre

Dr. Irfan Dhalla
Staff Physician and Scientist, Li Ka Shing Knowledge Institute, St. Michael's Hospital;
Assistant Professor, Medicine and HPME, University of Toronto; Adjunct Scientist, ICES

Dr. Alan Forster
Co-Director, Ottawa Hospital Centre for Patient Safety; Associate Professor of Medicine,
University of Ottawa; Scientist in the Clinical Epidemiology Program, Ottawa Hospital Research Institute

Lori Frampton
Senior Quality Improvement Consultant, Health Quality Ontario

Dr. Joseph Lee
Chair and Lead Physician, Centre for Family Medicine FHT (Waterloo Region)

Bill MacLeod
CEO, Mississauga Halton LHIN

Cynthia Majewski
Executive Director, Quality Healthcare Network

David Murray
CEO and President, Sioux Lookout Meno Ya Win Health Centre

Emily Lap Sum Musing
Executive Director of Pharmacy, Clinical Risk and Quality and
Patient Safety Officer for the University Health Network

Dr. Peter Nord
VP Medical Affairs and Chief of Staff, Providence Healthcare

Dr. Tia Pham
Virtual Ward Physician Lead, South East Toronto Family Health Team

Dr. Walter Wodchis
Associate Professor, HPME, University of Toronto; Co-Lead Health System Performance Research Network;
Adjunct Scientist, Institute for Clinical Evaluative Sciences (ICES)

Dr. Vandad Yousefi
Chief and Medical Director for Quality, Safety and Patient Experience, Lakeridge Health

In addition, the following individuals from MOHLTC participated as members of the Panel, and supported the Panel in carrying out its mandate:

- Fredrika Scarth, Manager, Health Quality Branch; Lead, Evidence Based Care Stream, Excellent Care for All Strategy
- Sten Ardal, Director, Health Analytics Branch
- Jillian Paul, Manager, Health Quality Branch; Lead, Performance and Results, Excellent Care for All Strategy
- Roy Wyman, Medical Consultant, Implementation Branch

1.4 Methodology

To complete its tasks, the Panel commissioned literature and jurisdictional reviews on interventions to reduce readmission to hospital. The Panel also reviewed administrative data on readmissions and research literature on readmission initiatives and measures.

The Panel established three working groups to develop recommendations and guidance on specific topics:

1. Reviewing and recommending measures and targets to monitor reductions in readmissions
2. Identifying potential clinical and organizational best practice guidance to reduce readmissions
3. Creating an inventory of leading practices in Ontario, and tools/approaches to support peer learning by health service providers

The report and recommendations below reflect the outcomes of the working groups and the deliberations of the Panel members.

The Current State and Evidence for Intervention

The Current State and Evidence for Intervention

Avoidable hospitalizations include hospitalizations which could have been prevented with comprehensive primary care focused on chronic disease management and prevention (for patients with what are sometimes referred to as ambulatory-care sensitive conditions); hospital days due to preventable adverse events in hospital; and readmissions to hospital, which could have been avoided if the care in hospital or the care after discharge was optimized. Several contributing factors lead to a high number of avoidable hospitalizations, rehospitalizations and additional hospital days. Avoiding preventable hospitalizations represents better quality of care for patients as well as better value and sustainability for the system. While recognizing the importance of all three contributing causes to readmissions, the Panel focused on strategies to reduce readmissions following transfer from hospital to community settings.

2.1 The Causes of Unplanned Readmissions

Hospital readmissions can be seen as a signal of system failure: they often occur because of gaps in care and communications as patients transition from the hospital setting to the next setting of care (home, community care, long-term care home, etc.), and reflect the complexities of the transitions in a health care system in which care is delivered by multiple health service providers with different accountabilities.

Unplanned 30-day readmissions accounted for an estimated $705 million in Ontario hospital costs in 2008/09, and many of these hospitalizations may have been avoidable. Ontario's 30-day readmission rate of 15 per cent is high in comparison to some leading health systems. Even more telling, significant variation across the 14 LHINs, ranging from 13 per cent to 18 per cent, exists, which suggests that there is room for improvement in Ontario.

Analysis of provincial administrative data demonstrates that readmissions are most common among the elderly with complex conditions, and that there are some specific conditions or diagnoses for which rates of readmission are consistently higher across the province. These diagnoses include Chronic Obstructive Pulmonary Disease (COPD) and Congestive Heart Failure (CHF). However, no one condition or diagnostic category makes up a majority of readmissions, and readmissions often occur for reasons unrelated to the original admission, and to hospitals that are not the originating hospital, suggesting that more general population-focused strategies, as well as disease-focused strategies, may be necessary to address the problem.

Exactly what proportion of current readmissions to hospital may be avoidable is difficult to determine. It is understood and expected that some readmissions will always occur for clinically complex patients, and as a result not all readmissions to hospital can be considered avoidable. A recent review of 34 studies that measured the proportion of readmissions considered to be avoidable found that the median proportion of readmissions deemed avoidable was 27.1 per cent but varied from 5 per cent to 79 per cent (Walraven et al., 2011).

Researchers assessing avoidable readmissions often restrict themselves to examining clinical causes, which may result in a narrow focus on the causes of preventable readmissions. A randomized clinical trial has shown that readmissions to hospital occurs not just for clinical reasons, but can also occur for socioeconomic and administrative reasons (Naylor et al. 1999). 2007 data from the United States suggest

that 76 per cent of 30-day readmissions were potentially preventable (MedPAC 2007). Hospital readmissions are often the result of deficiencies in coordination and communication within the health care system, such as failure to ensure that a patient has a follow-up visit scheduled with his or her primary care physician at the time of discharge (Goldfield, 2011). The entire health care team, with cooperation from community-based care providers, needs to work together to reduce readmissions resulting from non-clinical causes. Avoidable readmissions are not linked solely to hospital activity, which means there is a great need to ensure effective communication and coordination to support safe, effective transitions across all sectors of the care continuum.

2.2 Interventions to Reduce Unplanned Readmissions

There is growing, but still only limited, evidence on the effectiveness of interventions aimed at reducing avoidable hospitalizations. Interventions may be focused at different stages along the patient journey, from preventive management of people at high risk of admission, services that manage acute illness (or exacerbations of chronic illness) without resorting to hospital admission, through to interventions to improve patient discharge and transition from hospital (Purdy, 2010).

In terms of preventing unplanned readmissions in particular, there is some evidence that the rate of readmissions can be reduced by attention to some key best practices during hospital discharge and transition to the next setting of care. Much of the evidence that exists on discharge and transition interventions has been incorporated into guidance developed by the Commonwealth Fund in partnership with the Institute for Healthcare Improvement (Nielsen, 2009). The IHI's guidance is grouped in four categories:

I. Enhanced Admission Assessment for Post-Hospital Needs;
II. Enhanced Teaching and Learning;
III. Patient and Family-Centered Handoff Communication;
IV. Post-Hospital Care Follow-up.

The IHI Guidance documents are available at http://www.ihi.org

Several interventions in other jurisdictions have shown promising results in reducing unplanned readmissions. Several of the most promising are summarized below:

The **Transitional Care** intervention was developed to target patients who are hospitalized for Congestive Heart Failure (CHF) and uses highly trained advanced practice nurses (APN) to administer the intervention. The APNs met with patients in the hospital and in their home shortly after discharge to provide intense coaching and education on medications, self-care, and symptom identification. During the year following the hospital discharge, the number of hospital readmissions per patient year in the treatment group was 34 per cent lower than in the control group (Naylor et al., 2004). In addition, hospital readmission rates in the treatment group were 44.9 per cent compared to 55.4 per cent in the control group, a decrease of 10.5 percentage points. At one year, treatment group patients also had mean total costs 39 per cent lower than the control group patients (Naylor et al., 2004). The Transitional Care initiative has now been expanded to focus more broadly on all patients at risk of readmission.

The **Care Transitions Intervention** is a four-week intervention that focuses on improving care transitions by fostering improved self-management skills for community-dwelling patients age 65 and older. The four main components of the intervention are medication self-management; a patient-centred health record (PHR);

follow-up with a physician; and knowledge of the warning signs/symptoms and how to respond (Coleman et al. 2006). A Transition Coach (nurse) conducts a home visit within 72 hours of discharge and speaks with the patient by phone on post-discharge days 2, 7, and 14. The Coach prepares the patient for upcoming encounters with health care providers and helps the patient to reconcile or identify discrepancies in medications and serves as a single point of contact. An evaluation of patients admitted with one of ten conditions was conducted by Dr. Eric Coleman and colleagues. Patients who participated in the Care Transitions Program were significantly less likely to be rehospitalized than controls at 30, 90 and 180 days after discharge. The time to hospital readmission was significantly longer for the Care Transitions Program group than the controls (225.5 days vs. 217.0 days). It has been estimated that the cost savings associated with the intervention for 350 patients would be US$296,000 over 12 months (Coleman et al. 2006).

Project Re-Engineered Discharge (RED) is a process for improved discharge coordination. The project is located at an urban hospital that serves a low-income, ethnically diverse population. The intervention includes a number of components which are facilitated by a specially trained nurse called a Discharge Advocate who does the following: educates patients about diagnosis throughout the hospital stay; makes appointments for clinician follow-up, test result follow-up and post-discharge testing; organizes post-discharge services; confirms the medication plan; reconciles the discharge plan with the national guidelines and clinical pathways; gives the patient a written discharge plan, assesses the patient's understanding of the plan; reviews what to do if a problem arises; expedites transmission of the discharge summary to outpatient providers; and calls to reinforce the discharge plan and offer problem solving 2-3 days after discharge. The intervention significantly reduced hospital utilization (Jack et al. 2009 as cited in Boutwell et al. 2009).

Massachusetts General Hospital and the University of California, San Francisco, developed a **nurse-guided, patient-centred approach** that combines ongoing peer support from a trained elder with home visits and follow-up phone calls from an advanced practice nurse for un-partnered elderly patients who are discharged from hospital after a heart attack or bypass surgery. The program is intended to encourage compliance with medication regimens and recommended lifestyle changes, with the goal of reducing hospital admissions. A 24/7 patient randomized controlled trial found that the program improved adherence to medical recommendations and reduced hospitalizations due to cardiac-related complications, but failed to reduce overall hospital readmissions (Carroll et al. 2007 as cited in AHRQ 2008a).

A post-discharge, interdisciplinary care management program integrates medical and social care for low-income elderly patients with chronic illnesses. The program involves the development and review of a care plan, home visits, and patient education. A before-and-after pilot study conducted at Summa Care in Akron, Ohio, found that the program achieved savings of approximately $600 to $1,000 per patient per month as a result of fewer hospitalizations (Wright et al. 2007 as cited in AHRQ 2008b).

The **Transition Home for Patients with Heart Failure program** at St. Luke's Hospital in Cedar Rapids, Iowa, incorporates a number of components to ensure a patient's safe transition to home or another health care setting. These components include enhanced assessment of post-discharge needs at admission, thorough patient and caregiver education, patient-centred communication with subsequent caregivers at handoffs, and a standardized process for post-acute care follow-up. A before-and-after comparison found that the program reduced the 30-day readmission rate for heart failure patients from 14 per cent to 6 per cent (The Institute for Healthcare Improvement and the Robert Wood Johnson Foundation as cited in AHRQ 2009c).

The **Home Healthcare Telemedicine program** serves patients recently discharged with congestive heart failure or COPD. The intervention relies on two key elements: nurses specializing in providing telehealth care; and telemonitoring technologies. At program initiation, a home health nurse conducts two in-home visits during the patient's first week at home. A technician installs the necessary hardware for the telehealth system. Subsequently, a telemedicine nurse provides an introductory video encounter during first week after discharge and visits the patient remotely via video feed one to three times per week. The traditional home health nurse visits the telehealth patient once a week. Measurements are transmitted to the telehealth nurse. Data is fed directly into the IT system; abnormal parameters trigger an alert to the nurse, who can reinitiate home care in an effort to prevent hospitalization. Outcomes indicate that the re-hospitalization rate for patients with congestive heart failure decreased from 6 per cent before the program to about 1 per cent after program initiation. The cost of the telemedicine units (approximately $5,500) is less than one hospital admission, demonstrating the return on investment for the organization (Boutwell et al. 2009).

Transforming Care at the Bedside (TCAB) was a national program of the Robert Wood Johnson Foundation (RWJF) and IHI. One of the most promising changes developed within TCAB is "creating an ideal transition home" for patients discharged from medical and surgical units within hospitals. The initial focus of the intervention was improving transitions home for patients with congestive heart failure. The four core elements of the intervention are: enhanced admission assessment for post-discharge needs; enhanced teaching and learning; patient and family-centred handoff communication; and early post-acute care follow-up. Staff at St. Luke's Hospital in Cedar Rapids, Iowa, documented a 50 per cent reduction in rehospitalizations, from an average of 14 per cent to a current average of 7 per cent (Neilson et al. 2008 as cited in Boutwell et al. 2009).

Senior Clinician Review in the Emergency Department: The King's Fund reports that when patients in emergency departments are reviewed by a senior clinician, inpatient admissions can be reduced by over 10 per cent and admissions to the acute medical assessment unit by over 20 per cent (Ham, 2010).

Continuity of Care with a Family Doctor: The King's Fund reports that patients who have high continuity of care with their family doctor are less likely to be readmitted to hospital for ambulatory care sensitive conditions (asthma, angina, CHF, hypertension, epilepsy, diabetes, COPD and pneumonia) (Ham, 2010).

Hospital at Home: The King's Fund reports that when special services developed to provide patients with hospital care in their homes are executed, they can deliver similar outcomes to admission at equivalent or lower cost (Ham, 2010).

Assertive Case Management for People with Mental Health Problems: The King's Fund reports that when assertive and intensive case management is performed by a multidisciplinary team for people with mental health problems, reductions in the likelihood of their admission to hospital is achievable (Ham, 2010).

Structured Discharge Planning: The King's Fund reports that when a structured discharge plan, tailored to the individual patient, is developed, a reduction in length of stay and readmission rates, along with an increase in patient satisfaction, is achievable (Ham, 2010).

Strong evidence also suggests that many interventions, which might be expected to avoid hospital readmissions, do not affect readmission outcomes (Ham, 2010). These include:

- intermediate care and rehabilitation programs
- case management of frail elderly people (as may identify additional at-risk individuals)
- telephone follow-up after discharge

These studies were done in a number of settings in the US and UK. There are several common elements in the interventions targeted to improving care transitions and reducing the incidence of rehospitalizations among the targeted populations. These elements include better planning for discharge, improved communication between clinicians in different settings as well as between clinicians and patients, medication reconciliation and management after the patient returns home, patient and caregiver education and timely primary care follow-up in the community.

A recent review of care transition interventions, including studies of individual interventions to improve transitions such as improved discharge planning (Hansen, et al., 2011), found limited evidence for the effectiveness of these interventions. However, a number of studies that have implemented a "bundle" of interventions (such as use of an advanced practice nurse visiting patients before hospital discharge and after return home, along with medication reconciliation and appropriate ambulatory follow-up) have achieved significant results. This review suggests the need to develop care transitions strategies that include multiple components, to test and refine these strategies in the field (rather than just adopting practices used elsewhere) and to carefully evaluate their impact to assess their effectiveness and efficiency.

Some promising practices and interventions developed in other settings to reduce readmissions have been identified and are being piloted in Ontario. Key among these are:

1. **The Virtual Ward** is an innovative partnership between St. Michael's Hospital, Toronto Central Community Care Access Centre (CCAC), Women's College Hospital, the University Health Network and Sunnybrook Hospital. In this program patients deemed to be high risk for hospital readmission (according to a risk assessment, the LACE Index – described below) are "admitted" to the Virtual Ward on the day of hospital discharge. They receive care at home from an interdisciplinary team that provides CCAC case management and hospitalist medical support, integrating post-acute, primary and home care. The Virtual Ward team shares a common set of notes, meets daily, has 24/7 physician availability, and has its own CCAC ward clerk who can take messages and coordinate activity.

   Results in other jurisdictions suggest that the Virtual Ward is capable of reducing 30-day and 90-day readmission rates by 33 per cent to 50 per cent. Whether Virtual Wards can realize cost savings depend on several factors including the number of patients served, the risk profile of the patient population, the proportion of readmissions that can be prevented, and the incremental cost of providing care through the Virtual Ward. Preliminary estimates suggest that approximately one third of readmissions must be averted for a Virtual Ward to be cost-saving. The Virtual Ward has also been successful in demonstrating inter-organizational and sector integration at the point of care.

   A second Virtual Ward demonstration project is also underway for patients from the Toronto East General Hospital and the South East Toronto Family Health Team.

2. **Improving Quality and Safety in Care Transitions** is a pilot project adapting Eric Coleman's Care Transitions Intervention. It focuses on the role of a Care Transition Coach who visits at-risk patients prior to hospital discharge and again following their return home. The Care Transitions Coach is a nurse practitioner who provides patient education, ensures that follow-up appointments are made and reconciles the patient's medications at home. The program aims to enhance patient outcomes, reduce adverse events and, particularly, to reduce readmissions. The target population includes patients with complex medical conditions admitted to the general medical ward in two sites of a teaching hospital. These patients are likely to require home health services and are high risk for readmissions.

    In addition to assessing the impact of the intervention, the study is examining the impact of policy and health system context on the success of the intervention and how the intervention needs to be adapted to fit local service delivery patterns. Working in two sites in southwestern Ontario a CCAC nurse practitioner visits patients before and after acute discharge to complete a care plan and carry out medication reconciliation in the patient's home. The nurse practitioner was able to access the hospital database, including a list of conditions and medications to enable medication reconciliation, education and management in the home.

    Medication reconciliation uncovered discrepancies for many patients. In follow-up telephone interviews, clients indicated a lack of understanding of medication side effects, warning sign/symptoms and what to watch for. Early data on follow-up appointments with primary care physicians also indicate difficulties in arranging follow-up care. The intervention and evaluation are continuing with a target intervention population of 150 clients by the end of 2011.

3. The **LACE Index** is an easy-to-use tool designed to predict the risk of death or unplanned readmission of cognitively intact medical or surgical patients after discharge from the hospital to the community. The LACE tool has been piloted in several settings, including Trillium Health Centre, and a score of 10 or more (out of 18) is used to determine patient eligibility for the Virtual Ward and Improving Quality and Safety in Care Transitions projects. The LACE Index is composed of four elements: length of stay (L), acuity of admission (A), patient comorbidity (C) and number of visits to the emergency room (E). Unlike some other risk assessment tools, the LACE Index is easy since most of the data are readily accessible to clinicians through patient records or from interviewing patients.

    To compute the LACE Index, the Charge Nurse (or Team Lead) reviews the patient's chart and completes the LACE Index Score Card giving patients a score for each of the four factors. Depending on the patient's LACE score, enhanced services focused on improving transitions of care, including post-acute care support, are arranged accordingly. Patients who achieve a LACE of 10 or more have a 30-day risk of readmission of 19.1 per cent and a 90-day risk of readmission of 31.7 per cent.

4. The **University of Ottawa Heart Institute's Telehealth program** is a home telehealth monitoring program that cuts hospital readmission. By supervising patients through daily remote contact, quality of life and quality of care is improved, patients are able to stay home and participate in their own care and health dollars are saved.

Patients are closely followed for up to three months after they are discharged using a portable home monitoring system. Patients are taught to measure and report their own vital signs daily. The data is transmitted via telephone to the Central Monitoring Station at the Heart Institute. If any information is questionable or if a patient asks for help, a nurse will call back immediately (the staffing ratio of nurse to patient is 1 to 30-40).

An evaluation of the program has identified that 30-day hospital readmission rates for heart failure patients have been reduced by 54 per cent to 14.8 per cent in the six-month period after the patients were tracked via telehealth monitoring. Savings up to $20,000 have been demonstrated for each patient safely diverted from an emergency department visit, readmission and hospital stay.

The Context for Change in Ontario

The Context for Change in Ontario

Current data suggest that there are opportunities to strengthen a provincial focus on readmissions reductions by aligning the dissemination of best practice guidance with attention to other significant change levers, including funding incentives and health service provider and local health integration network (LHIN) accountabilities.

Ontario's current funding structures do not provide hospitals with strong incentives to invest in improved care transition processes to reduce patient readmissions; once a patient is discharged, the hospital is no longer accountable for their care.

A Patient-based Payment Implementation Advisory Committee was established by the MOHLTC to offer advice on the development of a policy framework to guide the design of the new funding system and supporting methodology. The Committee recommended a readmission funding policy be implemented in parallel with other provincial initiatives to reduce readmissions, such as quality improvement supports, communication of best practices, and adoption of patient risk identification tools.

A funding policy tied to hospital readmission rates could create incentives to extend a hospital's episode of care into the community after discharge, creating a business case to promote adoption of effective, evidence-based practices to reduce readmissions. The MOHLTC tracks 30-day readmission indicators and targets for a set of 25 Case Mix Groups (CMG) and high volume CMGs in the Ministry-LHIN Performance Agreement (MLPA).

Another key lever for change is the Quality Improvement Plans (QIP) mandated by the ECFAA. The ECFAA requires that every year, health care organizations (beginning with hospitals) develop a QIP for the following fiscal year and make that plan available to the public. These plans are an opportunity to highlight an organization's commitment to:

- delivering high quality health care;
- creating a positive patient experience;
- ensuring that it is responsive and accountable to the public;
- holding its executive team accountable for its achievement; and
- being transparent.

In 2010/11, the 30-day readmission rate was identified as an indicator of interest in the hospital QIPs.

Additionally, the MOHLTC sets targets with each individual LHIN for 30-day readmission rates as part of the MLPA. Targets are meant to be achievable but also to create confidence within the system by demonstrating progress in the performance of these indicators. Fiscal 2010/11 was the first year this measure was included in the MLPA. Targets represent risk-adjusted provincial averages with evidence-based reductions for CHF and COPD. Readmission rates are important indicators of the quality of care of inpatient and peri-discharge services, particularly as hospitals move to shorter lengths of stay and improving integration across the continuum of care. The 30-day readmission rate promotes equal access to quality care within a LHIN.

Panel Recommendations

Panel Recommendations

The Panel envisions a future health system in which non-acute care is better integrated and where care transitions are designed to improve patient outcomes and reduce the likelihood of readmission. Exceptional local models of integration in Ontario that exist today (e.g., Toronto Central LHIN Virtual Ward) will be commonplace. Hospitalization will be largely focused on people who are acutely ill rather than chronically ill. Frail elderly, children with complex needs and others at high risk of admission and readmission to hospital will have reliable access to community-based, multidisciplinary and preventive care when they need it. Consistent with this vision, the Panel offers recommendations for change to the health system generally, to the MOHLTC, to practitioners in the field and to HQO.

Overall Recommendations:

1. The Panel recommends an initial, intensive focus on improving care transitions from acute to community settings to reduce unplanned readmissions. Important future areas of focus include enhanced primary care, and reducing the number and frequency of admissions to hospitals for specific conditions such as ambulatory care sensitive conditions.

2. All sectors of the health care system have a role to play in high quality transitions, including acute care, family practice and other primary care and community care providers. Performance measures must reflect this shared accountability for transformation of the broader health system, and acknowledge that local variation (between rural and urban settings, for example) is inevitable and may be appropriate.

3. The Panel recommends a high-level review of policies and other system constraints on implementation of avoidable hospitalization and readmission reduction strategies, in particular, with respect to:

   a) prompt primary care follow-up that includes post-hospital discharge nursing support for high-risk patients;

   b) enhanced specialist consulting support (geriatrics, medication reconciliation, laboratory/diagnostics, etc.) in primary care; and

   c) payment policy to support changes in conjunction with demonstrated best practices.

   Addressing known systemic constraints is a necessary first step to reducing hospital readmissions. Therefore, the Panel endorses the recommendation of the Patient Based Payment Implementation Advisory Committee that a readmission funding policy be implemented in parallel with other provincial initiatives to reduce readmissions.

4. The Panel endorses focused attention to populations whose high risk of readmission has been demonstrated. Underlying issues are not only related to diagnosis or condition but also the social care needs of patients and their families.

5. The Panel recommends that the MOHLTC ensure that efforts are made to strengthen human resources in home and community care in order to support the goal of improving transitions in care. This includes strengthening CCAC and home care programs to include transition support. Such programming should consider a range of professional services to reduce the likelihood of readmission.

6. While there is growing evidence of effective practices for improving transitions, the implementation of these practices is challenging given the need to coordinate multiple health service providers to ensure a smooth transition for patients. The Panel recommends MOHLTC support for measured, incremental diffusion of best practices through action-oriented improvement programs that build on current demonstration projects (e.g., Virtual Ward, Care Transitions initiatives). Increased emphasis on medication reconciliation at discharge and in patients' homes following transitions is an essential element of effective transitions, and efforts need to target improvements in this area.

The Panel acknowledges that different strategies appropriate to local contexts with varying resources will be needed for different regions of the province. The Institute for Healthcare Improvement (IHI) "Improvement Collaborative" model is the Panel's recommended model of developing and assessing the practices and supports needed by hospitals, CCACs, primary care providers and other providers in testing and implementing best practice. Experience both in Ontario and elsewhere, and research evidence from a number of studies suggests that multiple interventions are needed to improve planning and care before discharge, following discharge, and in providing essential information across the transition. Such complex interventions are difficult to implement. As a result, efforts to explicitly examine how to implement these complex interventions, incorporating important but challenging practices such as medication reconciliation between hospital discharge and patient return to the community, is essential. Evaluation of these interventions is also needed to assess their impact.

Recommendations to the MOHLTC regarding system-wide alignment of funding, accountabilities, measurement and reporting.

7. The Panel recommends clearer accountability for the care provided to patients as they transition from one health service provider to the next.

8. The Panel recommends aligned accountability where providers share responsibility for a patient's care. Comparable or complementary performance indicators should be incorporated into each accountability agreement (MLPA, provider accountability agreements, etc.), with joint responsibilities defined.

9. Health service providers completing annual QIPs required by the ECFA should target improvements to the care delivered at and between transition points in a patient's journey.[1]

10. Hospital readmission data should be available and easily accessible to health care professionals at a local level (e.g., ward or department). These data should include readmissions to other hospitals, not simply the same hospital, and should be available promptly (i.e., within 1-3 months) to facilitate rapid cycle quality improvement.

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[1] 27 hospitals chose the 30-day readmission indicator as a priority within their 2011/12 Quality Improvement Plan, and eight more selected a 'readmission' indicator other than the recommended core indicator. Of this group, three hospitals selected more than one 'readmission' indicator (i.e., core + non-core).

11. The Panel recommends both outcome and process indicators be tracked as part of a provincial focus on reducing readmissions.

Eight indicators are already available [responsibility noted in brackets]:

a) Time from referral to CCAC to acute discharge. It is recommended that all CCAC referrals occur at least 48 hours prior to discharge for all patients at high risk of readmission. [Acute]

b) Time from referral to CCAC assessment with RAI-Contact Assessment for patients referred to home care (only for home discharges). It is recommended that RAI-CA assessments be completed within 24 hours after referral for all high-risk patients. [CCAC]

c) Time from discharge to first CCAC nursing visit for high-risk patients [CCAC]. It is recommended that CCAC ensure a nursing visit in home within three days of acute discharge (preferably earlier) for all high-risk patients. This nursing visit should include a review of patient medications to identify potential risks.

d) Length of stay (LOS) in acute care. This is recommended as a balancing monitoring measure to ensure that stays are not abbreviated or elongated and to enable assessment of relationship between LOS and readmissions. There is no performance target associated with LOS. [Acute]

e) Health Care Connect linkage for unattached patients. The Panel recommends that all patients who report not having a Primary Care Provider (PCP) be enrolled through Health Care Connect. [Acute]

f) Primary care visit within seven days for high-risk patients [Acute, PCP]

g) Primary care visit within 14 days for low-risk patients [Acute, PCP]

h) Medication Reconciliation (Pharmacy MedsCheck) billing within 14 days [Pharmacy]

Data for five other indicators are not yet available province-wide:

i) Full medication reconciliation completed prior to discharge from any hospital to another setting [Acute/Rehab/CCC]

j) Discharge Summary provided to patient at time of discharge, including full list of medications and follow-up appointments [Acute/Rehab/CCC] *(Patients at high risk of readmission only)*

k) Discharge Summary sent to primary care physician and specialists on the day of discharge, including full list of medications and follow-up appointments [Acute/Rehab/CCC] *(Patients at high risk of readmission only)*

l) Discharge Medication List sent to Pharmacy upon discharge, including full list of medications and follow-up appointments [Acute/Rehab/CCC] *(Patients at high risk of readmission only)*

m) Patient provided information at discharge on who to contact and how to use medications (communication of discharge plan to patient) [Acute/Rehab/CCC]

Evidence Based Standards of Care and Best Practices Recommendations to the field:

12. The Panel recommends the following to be standard practice in Ontario:

- All unplanned hospital admissions should be screened for risk of readmission using a standard risk assessment tool. The LACE Index, developed in Ontario for this purpose, is a simple, practical tool appropriate for readmission prediction in all hospitals.
- Standardized electronic discharge summaries (similar to ones used by St. Michael's Hospital and Sunnybrook Health Sciences Centre) should be standard practice province-wide.

- An expanded medication prescription/medication list should be provided to the patient or family member and sent to the family physician and/or community pharmacy upon discharge. The list should include not only current prescriptions but also a summary of medication changes since admission (i.e., new medications, discontinued medications, adjusted medications).

13. The Panel recommends specific best practices in hospital discharge and transition planning, which are described in the **Safe Discharge Practices for Hospital Patients Checklist** (See Appendix 3).

14. The Panel recommends the further testing, refinement and adoption of the Checklist and other tools to support providers in care transitions. The checklist tool for hospital-based providers, attached in Appendix 3, is an initial step in the development of a standardized checklist for province-wide spread and implementation.

15. The Panel recommends the further refinement and implementation of a Hospital Avoidance Practices Inventory (HAPI) of best practices to reduce readmissions and avoid hospitalizations in Ontario. A searchable inventory would promote safe, effective, patient-centred health care transitions. The Panel considered potential HAPI specifications and described its recommendations to the MOHLTC in separate documentation.

Monitoring and Evaluation of Interventions Recommendations to Health Quality Ontario:

16. Interventions aimed at reducing avoidable hospital readmissions should be assessed by HQO. Evaluations of the effectiveness and efficacy of these interventions in the Ontario context will provide evidence of their impact and guidance to decision-makers. The results should be made available to health care professionals through the annual *Quality Monitor* report and other channels.

17. While the LACE Index is an appropriate tool for readmission prediction in hospitals, additional tools must be developed to quantify risk for avoidable hospitalizations in the community, long-term care and other non-acute settings. HQO should seek to develop such tools and test their effectiveness in local demonstration projects.
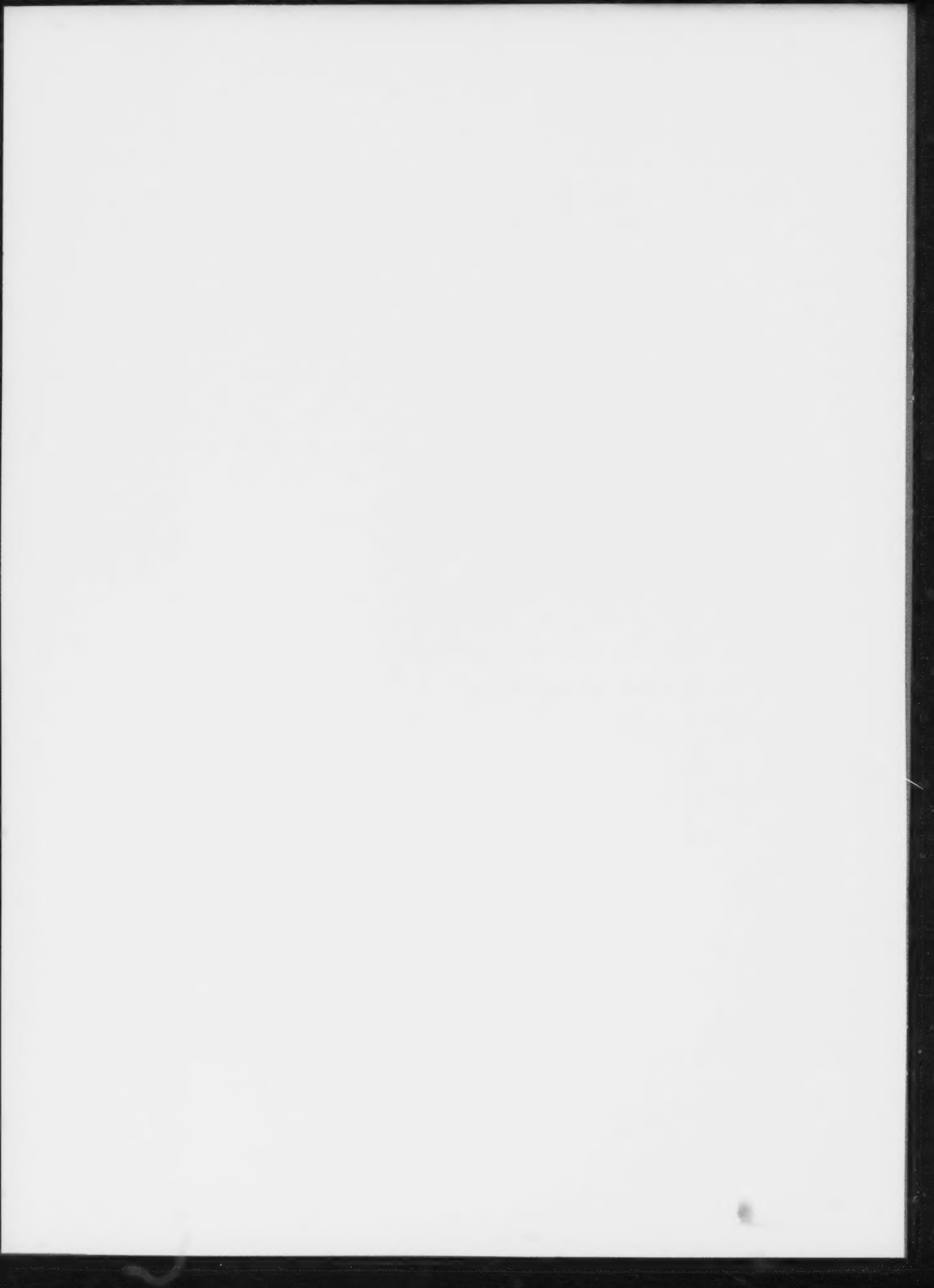
Appendices

Appendix 1.   Summary Report from the May 31, 2010 Leadership Forum

Avoidable Hospitalization Advisory Forum, May 31, 2010
Communiqué

Ontario
Ontario Health Quality Council

The Ontario Health Quality Council (OHQC) and the Ministry of Health and Long-Term Care (MOHLTC) collaborated on a one-day Avoidable Hospitalization Advisory Forum to seek advice and input from health care experts and leaders on how to best focus quality improvement efforts to support reductions in avoidable hospitalizations in Ontario.

The one-day forum in Toronto on May 31, 2010 was attended by OHQC and ministry staff, clinical leaders, researchers, health care practitioners as well as representatives from a broad range of health care sectors and organizations. The full participant list is attached.

Dr. Ben Chan, CEO of the OHQC, opened the day with a discussion of the day's objectives, which were to:

- Review patterns of Ontario data on hospitalizations
- Review and discuss a synthesis of literature on ideas for improvement
- Develop consensus on 'Big Dot' aims of avoidable hospitalization framework
- Develop consensus on key drivers that lead to avoidable hospitalizations
- Identify key opportunity areas to reduce avoidable hospitalizations based on data and literature presented
- Develop provincial Aim Statements for reducing avoidable hospitalizations

Fredrika Scarth from the Performance Improvement and Compliance Branch, MOHLTC, presented on the strategic context for the provincial focus on Avoidable Hospitalization: the Excellent Care for All Strategy (ECAS). The ECAS has an overall aim of improving quality and evidence-based practice to support a sustainable health care system. Fredrika presented a broad Avoidable Hospitalizations framework to the group for discussion, which is divided into three main aims: fewer preventable adverse events, more effective care transitions and better chronic disease prevention and management.

Debbie Gibson and Sten Ardal from the Health Analytics Branch, MOHLTC, presented a descriptive data analysis on 30-day readmissions, preventable adverse events and ambulatory care sensitive conditions (ACSC). The data showed potential areas of opportunity for improvement across these indicators. Rates for 30-day readmissions and ACSC have been relatively stable over the years, but there is variation across the province suggesting room for improvement.

Next, four accomplished researchers and clinicians presented relevant research on components of the framework and the underlying broader determinants of health.

Liisa Jaakkimainen, a scientist from ICES and family physician, presented on the role of primary care in chronic disease management. Specifically, she identified the important role that primary care delivery models, primary care teams, and electronic medical records have in effectively managing chronic diseases to reduce avoidable hospitalizations.

Reducing Avoidable Hospitalizations		
Fewer preventable adverse events	**More effective care transitions**	**Better chronic disease prevention and management**
Hospital stays (admissions, readmissions and hospital days) that could be avoided through enhanced safety practices in hospital or community. Potential outcome measures: Expected/actual length of stay (LOS), Readmission (72 hours), Nosocomial Infection, Falls, Pressure Ulcers, Medication Errors, Critical Incidents.	Admissions and readmissions that could be avoided through enhanced hospital discharge practices and more effective care transitions. Potential outcome measures: Readmission (7, 30, 90 days); multiple psychiatric readmissions.	Admissions and readmissions that could be prevented through more effective chronic disease management and patient self-management. Potential outcome measures: Ambulatory Care Sensitive Conditions (ACSC) hospitalization.
Settings for Intervention • Hospital • Long-Term Care Homes • Community (CCAC/CSS)	• Hospital • Community (CCAC/CSS, Pharmacy) • Primary Care • Long-Term Care Homes • Mental Health and Addictions	• Primary Care • Public Health
Aligned Strategies • Most Responsible Physician Collaborative Funding • Patient Safety Reporting • Residents First	• ER/ALC Strategies • Integrated Client Care • Mental Health and Addictions • Medication Reconciliation/ MedsCheck	• Chronic Disease Prevention and Management • Diabetes Strategy • Family Health Care for All

Next Walter Wodchis presented research and data from the Health System Performance Research Network relating to improved integration and transitions of care. Specifically Walter spoke about how to identify target populations for system improvement.

The third presenter was Ross Baker, Professor at Health Policy, Management and Evaluation at the University of Toronto. Ross spoke to the importance of understanding contextual factors in implementing interventions to improve transitions of care, and described current work to develop case studies of transition interventions in three different contexts, including the SW LHIN. Ross also spoke to the third area of focus in the framework, preventable adverse events, and indicated that while there has been significant provincial focus in the area of patient safety in acute settings, through both public reporting initiatives on the part of MOHLTC and quality improvement initiatives through programs such as Safer Healthcare Now!, there are still areas of opportunity for improvement. Ross indicated that increased provincial focus (through provincial targets and public reporting) could be given to hospital acquired infections and pressure ulcers and falls prevention in hospitals.

Finally, Arlene Bierman of St Michael's Hospital and a board member of the OHQC brought an equity lens to the avoidable hospitalizations discussion. Arlene presented data relating to how disparities in income and varied geographical access to primary care, as well as age, sex and overall mental health affect health outcomes and hospital admission/readmission rates.

After lunch, Ben Chan presented a Driver Diagram for avoidable hospitalizations that depicted care gaps, root causes of gaps and 30 change ideas to reduce avoidable hospitalizations. The OHQC had developed this Driver Diagram through consultation with system experts.

The remainder of the afternoon was broken into two working group sessions, both of which produced fruitful discussion and highlighted several areas that the ministry needs to investigate further. There was strong alignment/consensus through the room in a number of areas:

1. Avoidable Hospitalizations is generally the right issue to focus on, but the positioning of the framework should be reworked to:

   a) Have meaning for all areas of the health system,
   b) Take a patient-centred focus,
   c) Focus first on efforts to improve transitions in care (more could be achieved first through narrower focus), and
   d) Consider reduction of adverse events as a foundational issue across the continuum of care (not a separate stream of efforts).

2. Focus of efforts should be on target populations, not specific conditions/diseases in isolation. Key populations of interest identified: first and foremost the frail elderly population, then those with multiple co-morbidities, mental health and complex children.

3. Aligning efforts (QI, reporting, measurement, etc.) is necessary to achieve results.

4. Consensus on two performance metrics to support big dot goal: 30-day readmissions and ACSC hospitalizations; there is room for improvement provincially in both areas. Other more specific quality measures should also be tracked through initiatives that are implemented.

5. 30 per cent improvement may be the right target for 30-day readmissions; however, improvement at the system level will likely be seen only over a multi-year time frame (suggested over 5-10 years).

6. Specific targets should be validated through additional expert panel discussion.

7. Learn from successes in Ontario and international best practices.

8. Build on existing initiatives, align measurement and reporting.

9. Many opportunities have the potential for high reward, but will also require high effort of resources, culture change, etc. in order to implement successfully.

The ministry and OHQC will jointly move forward on this important work based on the key outcomes/ messages from this Forum:

- Rework framework to focus on a patient's safe, effective journey across transitions in care
- A 30 per cent improvement in 30-day readmissions may be an appropriate target, but would likely only be achieved over a 5-10 year period
- An Expert Panel should be convened to determine the most appropriate measure, target and timeline for this work.

Avoidable Hospitalizations Stakeholder Advisory Forum: Participant List
May 31, 2010

Name	Title	Organization
Allison Costello	Performance Improvement Planning Lead	PICB, MOHLTC
Amanda Baine	Project Coordinator	PICB, MOHLTC
Arlene S. Bierman, MD, MS	Ontario Women's Health Council Chair in Women's Health	University of Toronto and Li Ka Shing Knowledge Institute, St. Michael's Hospital
Ben Chan, MD MPH MPA	Chief Executive Officer	Ontario Health Quality Council
Brenda Fraser	Executive Director	Quality Improvement and Innovation Partnership
Chaim Bell, MD, PhD, FRCP (C)	Chair in Patient Safety and Continuity of Care Physician and Scientist Adjunct Scientist Associate Professor of Medicine and Health Policy Management and Evaluation	CIHR/CPSI St. Michael's Hospital & Keenan Research Centre ICES University of Toronto
Charlene Sandilands	Director, Cardiac Health System	Trillium Health Centre
Cheryl Harrison	Vice President of Patient Care Services & Chief Nursing Executive	Soldiers Memorial
Cynthia Majewski	Executive Director	Quality Healthcare Network (QHN)
Debbie Gibson	Senior Health Analyst	Health Analytics Branch, MOHLTC
Edward Etchells, Dr. *regrets*	Associate Director, University of Toronto Centre for Patient Safety	Sunnybrook Health Sciences Centre
Eileen Patterson	Director, Quality Improvement	Ontario Health Quality Council
Elliot Gold	Manager, Strategic Planning & Research	CIB, MOHLTC
Emily O'Sullivan	Manager, Performance Improvement Implementation	PICB, MOHLTC
Fredrika Scarth	Manager, Performance Improvement Planning and Evaluation	PICB, MOHLTC
Genevieve Obarski	Senior Quality Improvement Consultant	Centre for Healthcare Quality Improvement
Gloria Whitson-Shea	Clinical Lead	Waterloo Wellington LHIN
Imtiaz Daniel	Research Director	Ontario Health Quality Council
Irfan Dhalla	Staff Physician and Scientist	Keenan Research Centre in the Li Ka Shing Knowledge Institute

Avoidable Hospitalizations Stakeholder Advisory Forum: Participant List
May 31, 2010

Name	Title	Organization
James Meloche *regrets*	Senior Director, System Design & Implementation	Central East LHIN
Jillian Paul	Lead, Performance & Results	Excellent Care for All Strategy Branch, MOHLTC
John Ronson	Facilitator	Courtyard Group
Kelly Gillis	Senior Director, Planning, Integration and Community Engagement	South West LHIN
Kyle Johansen	Health System Design Specialist	South East LHIN
Laurie Bourne, MHSc	Manager, Surgery and Diagnostic Imaging Wait Times	Cancer Care Ontario
Liisa Jaakkimainen MD, MSc, CCFP	Scientist Staff Physician Associate Professor	ICES Sunnybrook Health Sciences Centre Department of Family and Community Medicine, University of Toronto
M. J. Marcaccio, MD, FRCSC, FACS	Professor, Dept. of Surgery Head, Service of Surgical Oncology	McMaster University Hamilton Health Sciences and Juravinski Cancer Centre
Marion Emo	Senior Director, Planning, Integration and Community Engagement	Hamilton Niagara Haldimand Brant LHIN
Matt Drown *regrets*	VP, Human Resources	RBJ Schlegel Homes
Mimi Lowi-Young	CEO	Central West LHIN
Monita O'Connor	Director, Performance Improvement and Integration	Mississauga Halton LHIN
Nizar Ladak	Chief Operating Officer	Ontario Health Quality Council
Pat Stoddart	Senior Director, Performance, Contract and Allocation	Central West LHIN
Patti A. Cochrance	VP Patient Services, Quality & CNO	Trillium Health Centre
Paula Blackstein-Hirsch	Executive Director	Centre for Healthcare Quality Improvement
Peter Nord, Dr.	V.P. Medical Affairs and Chief of Staff	Providence Healthcare
Rhona McGlasson RPT, MBA	Project Director	Holland Orthopaedic & Arthritic Centre
Romeo Cercone	Vice President, Quality, Planning & Performance Improvement	St. Joseph's Healthcare Hamilton
Ross Baker	Professor, Health Policy, Management and Evaluation	University of Toronto

Avoidable Hospitalizations Stakeholder Advisory Forum: Participant List May 31, 2010		
Name	**Title**	**Organization**
Roy Butler	Integrated Vice President, Quality and Strategy Performance	London Health Sciences Centre/ St. Joseph's Health Care, London
Sam Tirkos, Dr.	Hospitalist	South East Toronto Family Health Team, Toronto East General Hospital
Stacey Brener	Research Coordinator and MSc Candidate	St. Michael's Hospital & University of Toronto
Stacey Daub	Sr. Director, Client Services	Toronto Central Community Care Access Centre
Sten Ardal	Director	Health Analytics Branch, MOHLTC
Susan Wheeler	Manager of Strategic Initiatives	Quality Improvement and Innovation Partnership
Sylvia Hyland	Vice President and Chief Operating Officer	ISMP Canada
Tai Huynh	Director	Excellent Care for All Strategy, MOHLTC
Tia Pham, Dr. *regrets*	Hospitalist	South East Toronto Family Health Team, Toronto East General Hospital
Tim Burns	Director	PICB, MOHLTC
Vandad Yousefi	Physician Lead – Quality	Lakeridge Health Corporation
Vania Sakalaris	Director of Program Development	Central LHIN
Victoria van Hemert	Senior Director	Central LHIN
Walter Wodchis, PhD	Associate Professor Research Scientist Adjunct Scientist Co-Lead	HPME, University of Toronto Toronto Rehabilitation Institute Institute for Clinical Evaluative Sciences Health System Performance Research Network

Care Gap

Avoidable hospitalizations of patients acute care sensitive conditions and unplanned visits to the Emergency Department (ED) or readmissions following index hospitalization

Better Chronic Disease Prevention and Management

- Primary Care
- ED Visit

Fewer Preventable Adverse Events

- Index Hospitalization

More Effective Care Transitions

- Discharge Transition
- Poor Discharge Care

All Phases of Care

Patients not offered right drugs, treatments for chronic disease

Patients not regularly monitored

Patients non-adherence to recommended treatments, drugs

Patient lifestyle (e.g., smoking)

Drug errors, adverse drug reactions

Patients unable to access primary care

Home care needed but cannot be arranged, resulting in admission

Drug prescriptions leading to adverse event after visit (e.g., drug interaction, adverse reaction, unintended change)

Missed diagnoses

Patient not getting right drugs, treatments while in ED

Patient not getting right drugs, treatments in hospital

Adverse event during hospitalization

Drug prescriptions leading to adverse event (e.g., drug interaction, adverse reaction, unintended change)

Lack of, incomplete treatment plan, or delay in transmitting it

Poor communication of discharge instructions to patient

Risk of readmission not recognized

Follow-up care not arranged (no one identified for follow-up or no appointment made)

Lack of access to specialist opinion on complex issues by primary care, home care

Disagreement among providers about the treatment plan

Accidents in home (e.g., falls) with frailty a contributing factor

Any of the care gaps under "primary care Chronic Disease Management patient"

Lack of will to change

Lack of skills to change

Root Cause

- Provider too busy, forgets, or is unaware of best practices for treatment

- No organized monitoring system

- Patients not engaged in their care or not motivated to modify behaviours

- Handwriting, drug interactions, unnecessary polypharmacy, drugs unknowingly given by multiple MDs

- Lack of multidisciplinary teams in primary care, or teams not working most effectively and efficiently as a team, or not enough providers

- Delay in home care services (communication, staff scheduling, etc.)

- Lack of available home care services

- Handwriting, miscommunication, drug history or past medical history not shared between providers

- Lack of experience, backup, too busy & miss details, poor communication, diagnostics not available

- Provider too busy, forgets, or is unaware of best practices for treatment

- Providers delay dictating discharge summaries – too busy, no consequences if late

- Discharge instructions to providers focuses on treatment at point in time rather than suggested treatment options as symptoms or illness changes

- Patients do not understand medical terms, not fluent in English, cannot memorize verbal instructions, too stressed at time of illness to absorb information

- Staff unaware of need to identify risk or tools to do so

- Patients may be told to make appointment but forget or cannot get into see provider in a timely fashion

- Specialists not available, not on-call; not accessible for simple follow-up questions

- No communication mechanism between in-hospital doctors, specialists and primary care

- Safety assessments may be missed in home care

- Lack of leadership

- Lack of culture of quality and safety among staff

- Lack of accountability or incentives for quality

- Lack of Quality Improvement skills among staff – no previous training

Change Ideas

- Standard orders, decision tools, flow sheets, flow charts, checklists, electronic reminders – primary care

- Standing lab orders & recall system, titration protocols (e.g., coumadin)

- Interactive voice recognition – automated phone calls to monitor symptoms, medication use

- Telehomecare (devices to monitor vital signs, communicate with staff)

- Patient self-management training (one-on-one or group sessions, patient goals & targets)

- Electronic Medical Records – flag drug interactions, dose errors, eliminate handwriting probs

- Health Human Resource solutions, increase MDs, RNs, NPs, other health professionals; promote team-based models (e.g., Family Health Teams); train teams on teamwork

- Advanced access & office efficiency techniques

- 24/7 availability of home care staff for assessment; consider advanced access type scheduling

- Consider increasing home care services, if all efficiencies maximized

- Medication reviews by pharmacist

- Medication reconciliation or Electronic Health Records with view of all prescriptions

- Standard orders, decision tools, flow sheets, flow charts, checklists, electronic reminders – hospital

- Database-generated discharge summaries

- Stepped action plans from in-hospital physicians to primary care, home care detailing steps to follow if patient symptoms change

- Written discharge instructions (meds, monitoring, appointments, who to contact, etc.) in simple vocabulary, multiple languages

- Apply risk scoring (e.g., LACE index) and triage patients post-discharge services

- Make booked follow-up appointment at discharge the standard of care

- Specialty clinics (e.g., Congestive Heart Failure clinics), poly-clinics, or virtual wards esp. for complex cases, with on-call system

- Improved provider communication mechanisms (e.g., e-mail)

- Falls & safety risk assessments; prevention e.g., mobility aides, handles

- Governance & leadership development & Quality Improvement Plans

- Anonymous individual-level provider (e.g., physician) feedback of data on compliance with best practices

- Public reporting at institution or provider group level

- Accountability agreements with performance target setting and consequences (e.g., pay-for-performance, sanctions, awards)

- Quality Improvement skills development among staff (model for improvement, LEAN, etc.)
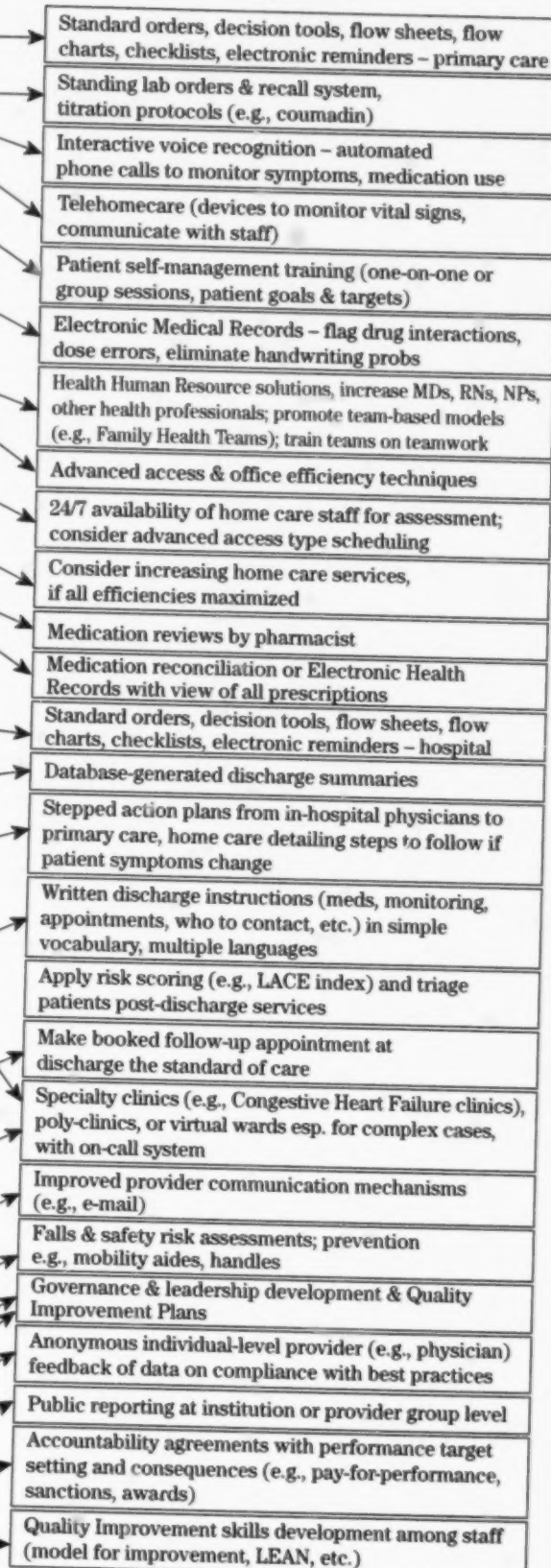
Appendix 2.   Avoidable Hospitalization Advisory Panel Terms of Reference

Targeting Avoidable Hospitalizations through Improved (Safer, More Effective) Transitions in Care

Advisory Panel
Terms of Reference

Background:

- The *Excellent Care for All Strategy* (Strategy) will support the government's commitment to excellence in the quality, value-for-money and evidence base of patient care as the foundation of a sustainable health care system. Among other goals, the Strategy will embed the principles of quality and sustainability throughout the health care system by supporting the dissemination of evidence-based best practices and tools to help front-line staff, managers and administrators make permanent changes in their organizations.
- Reducing avoidable hospitalization is a key result area of Excellent Care for All Strategy
- At a May 31st Avoidable Hospitalizations (AH) Advisory Forum attended by researchers, clinical leaders and quality improvement groups there was general consensus that there are opportunities to reduce avoidable hospitalizations in Ontario, and that the focus of initial efforts should be on improving transitions in care to reduce readmissions to hospital.
- Forum participants agreed that 30-day and 90-day readmissions could be an appropriate system-level measure to show progress in improving patient transitions across care settings. However, consensus was not reached on an appropriate target and associated timelines, and other measures that could be used as part of a performance framework to support reductions in 30-day and 90-day readmissions.
- It was suggested by the participants at the Forum that an Advisory Panel be convened to advise the province on appropriate provincial measure(s) and targets and on best practices related to reducing readmissions and avoidable hospitalizations.

Mandate:

The Advisory Panel will:

- provide advice on the most appropriate measures, targets and timelines for initiatives focused on reducing readmissions/avoidable hospitalizations as part of the Excellent Care for All Strategy;
- provide advice on evidence-based practices that ensure efficient, effective, safe and patient-centred care transitions;
- provide advice on strategies for identification and selection of leading care transition practices in Ontario to be compiled in an inventory or "Living Lab" of innovative models of care that reduce readmissions/avoidable hospitalizations;
- provide advice on local evidence criteria for leading practices in Ontario;
- provide advice on the scalability and spread of leading practices in Ontario;
- monitor the outcomes of care transitions initiatives, and assess their impacts on hospital readmission; and
- identify policy or systemic barriers and enablers to safe, effective and patient-centred care transitions, including funding policy, and funding incentives or disincentives.

Confidentiality

Advisory Panel members are an important link for two-way communication between the Excellent Care for All Strategy and health sector professionals across the province. As such, the Ministry of Health and Long-Term Care (MOHLTC) expects members to discuss with their peers the elements of the Strategy that are already in the public domain.

In their role as advisors to MOHLTC, panel members will also be privy to preliminary, confidential or draft materials that are not approved for distribution or discussion outside the Panel. Members agree to treat as confidential all materials that MOHLTC identifies this way.

Conflict of Interest

1. A conflict of interest exists where a Member engages in any private or personal business, undertaking or other activity in which the Member's private or personal interest conflicts with his or her duties as a Member or with the interest of the Advisory Panel. A conflict of interest may be actual, potential or perceived.
2. The focus of conflict of interest and these guidelines is the "private or personal interest" of the Member. This phrase should be interpreted broadly and extends beyond a direct or indirect pecuniary interest to include any direct or indirect benefit to the Member; the organization/institution/association with which the Member is affiliated; or the Member's spouse, children, siblings or parents (the "Member's family").
3. As a general principle, a "personal or private interest" should be interpreted as a personal or individual interest in the sense that it is not one that belongs to the general public or one that is common to a class of persons.

Declaring a Conflict

4. Panel members shall disclose to the Chair of the Advisory Panel the existence of any circumstances that could arise or that have arisen in which their personal or private interest conflicts with or could conflict with the interest of the Advisory Panel or with their duties or obligations as a Panel Member. Panel Members shall make this disclosure as soon as they become aware of any such circumstances.
5. As soon as they become aware of such circumstances, in addition to immediate disclosure, Panel Members shall take all reasonable steps to avoid the conflict, having regard to these guidelines and to any other conflict of interest policies that may be established by the Advisory Panel. **In particular, Panel Members shall immediately refrain from any further participation in discussions or decision-making relating to the subject matter of the possible conflict and shall not attempt to influence the discussions or decision-making or vote on the matter.** Once Panel Members have made a disclosure to the Chairs, they shall follow the Chair's directions.

Funding:

MOHLTC will fund the administration costs of the Panel.

Reporting:

The Panel will report to the ministry.

Meetings:

The initial meeting occurred in September 2010. Subsequent meetings of the full table or Panel sub-groups occur monthly for a six-month duration. The role and future of the Panel will be assessed in the Spring.

Appendix 3.   Safe Discharge Practices Checklist

Guidelines to the Field for use of Checklist and other practical tools

The Panel developed practical tools (page 42) that appear in the form of a (i) checklist and (ii) relevant measures and evaluations. If developed in future, a proposal for (iii) an inventory of leading clinical/administrative practices would complete the set of three inter-linked resources. The Panel offered the following advice for using the tools in the field:

i. The **Safe Discharge Practices for Hospital Patients Checklist (Checklist)** is an index of steps that can be followed when providing care to patients with unplanned hospital admissions. Health care organizations can delegate responsibility of the Checklist to a health care professional (e.g., Most Responsible Physician, Nurse Practitioner, Discharge Planner, etc.) who will ensure the Checklist is completed, but the steps themselves are carried out by a number of health care professionals, including primary care physicians, nurses, pharmacists, CCAC and ward clerks. The Checklist illustrates a five-day hospital admission as a representation of a hospital stay, acknowledging that not all hospital admissions are five days.

To use the Checklist, health care providers must complete the Service Provision at the identified time. If the Service Provision is highlighted, health care providers can learn more about the Service Provision by following the link. If the Service Provision has an [M&E] symbol, Checklist users can follow the link to learn about a recommended **Measure and Target.** In future, if the Service Provision corresponds to an initiative describedin the proposed Hospital Avoidance Practices Inventory (HAPI), the health care provider would be able to follow the HAPI link to learn about a peer's experience with a similar initiative somewhere in Ontario.

ii. **Measures and Evaluations:** for health care organizations to effectively evaluate their efforts to reduce avoidable hospitalizations, the following can be considered:

- hospital and CCAC should track readmission risk scores and target resources to patients at high risk for acute readmission (e.g., LACE score 10+)
- service provisions suggested in the **Safe Discharge Practices for Hospital Patients Checklist** should be implemented and tracked for each patient, particularly those at high risk for readmission
- performance measures should be used to track and improve performance for these outcomes – targets are 100 per cent for all measures
- Ongoing reports should include not only performance measures but also include an analysis of the observed relationship between process performance measures and the readmission outcome measure

iii. The **Hospital Avoidance Practices Inventory** (HAPI) would be a searchable electronic database of practices that targets reducing readmissions and avoiding hospitalizations in Ontario. HAPI would promote safe, effective, patient-centred health care transitions and would be disseminated throughout the health sector, engaging health care practitioners, health system leadership and quality improvement organizations to participate, develop, and implement provincial initiatives designed to guide improvements. Health system providers could review practices that had been implemented in other organizations to find opportunities for impact within their own setting.

Panel Recommendations for Implementation and Spread of Checklist/Practical Tools

i. The effective implementation and dissemination of the **Safe Discharge Practices for Hospital Patients Checklist** will require the execution of the following:

- share Checklist for review and constructive feedback from other stakeholders (e.g., OMA and OHA)
- careful field testing and evaluation in both academic and community settings to finalize:

- Checklist content (i.e., services provisions, language and timeframe)
- Checklist format, ease of use and functionality
- once available, include a risk assessment tool proven to predict rehospitalization (e.g., LACE Index)
- agreement from the field and stakeholders on health care actor, or team, responsible for ensuring each step is carried out.
- establish explicit links between the Checklist and HAPI, avoidable hospitalization work of the Health Quality Ontario, Most Responsible Physician training, MOHLTC, and others
- develop strategy for communication and engagement
- integrate Checklist into current hospital IT infrastructure

ii. To successfully implement **Measures and Evaluations** to gauge the success of interventions aimed at reducing avoidable hospitalization, the following steps must first be considered:

- timely performance measures should be reported on a public website
- risk screening should be implemented and tracking automated in electronic patient information systems in acute hospitals
- CCAC referral processes should be streamlined (any admission from community should be considered for home care referral prior to LTC application or referral just to CCAC and let CCAC determine capacity to discharge to community)
- patient self-care knowledge survey (e.g., using Health Outcomes for Better Information and Care initiative (HOBIC) therapeutic self-care measure) should be completed prior to discharge to identify patient knowledge gaps
- collaboration between acute and CCAC is essential, effective hospital discharge planning processes are essential
- engagement with community pharmacy is an important resource to achieve target outcomes
- ongoing evaluation of interventions using comparable measures is important to enable (comparative) effectiveness
- a position paper should be commissioned to identify local opinion and evidentiary basis for clinical governance and accountability, including shared accountability and integrated accountability for avoidable hospitalizations
- information should be well publicized/communicated to stakeholders regarding financial incentives to see patients after acute discharge (physician and pharmacy)

iii. Developing the **Hospital Avoidance Practices Inventory** website and fostering a community of users will require careful staging of multiple interdependent steps. The Advisory Panel recommends the following sequence:

- establish explicit links between HAPI and complementary avoidable hospitalization programming of Health Quality Ontario, MOHLTC, and others
- recruit launch partners and finalize an agreed strategy for communication and engagement
- confirm review process for new submissions and recruit expert reviewers
- prepare development site for testing, including all seed content, hyperlinks and functionality
- submitters preview their respective "seed" initiatives on the development site, including links to Registry and related content on external sites (checklists, published literature, etc.)
- introduce targeted communications and appropriate rewards to solicit new initiatives for HAPI, especially where gaps exist (long-term care sector, Noble Failures, initiatives that meet the standard for "Evidence Based," etc.)

Safe Discharge Practices for Hospital Patients Checklist

|		Day 1	Day 2	Day 3	Day 4	D/C	D/C +1	D/C +2	D/C +3	D/C +4	D/C +5	D/C +6	D/C +7	D/C +8	D/C +9	D/C +10
		Admit														
1	**Hospital**															
a	Assess patient to see if they still require hospitalization [M&E]	✓	✓	✓	✓											
2	**Primary Care**															
a	Identify &/or confirm patient has an active primary care physician (PCP) – alert care team if no PCP and/or contact Health Care Connect to begin PCP search [M&E]	✓														
b	Contact PCP and notify them of patient's admission, diagnosis and predicted discharge date	✓														
c	Book post-discharge primary care follow-up appointment within 7-14 days of discharge [M&E]: • Patient may need to be seen sooner based on risk of readmission (LACE) • Notify PCP pending diagnosis date • PCP can use supplemental billing code e080 if seeing patient following a hospital discharge				✓											
3	**Medication Safety**															
a	Develop best possible medication history (BPMH) and reconcile this to admission's medication orders [M&E]	✓														
b	Teach patient how to properly use discharge medications and how these relate to medications they were on prior to admission	✓	✓	✓	✓	✓										
c	Reconcile discharge medication order/ prescription with BPMH and medications prescribed while in hospital [M&E]					✓										
4	**Follow-up**															
a	Perform post-discharge follow-up phone call to patient. During call, ask: • Has patient received their new meds (if any)? • Has patient received home care? • Remind patient of upcoming appointments • If necessary, schedule patient and caregiver to come back to facility for education and training															✓ (if needed)
b	If necessary, arrange out-patient investigations (lab, radiology, etc.)					✓										
c	If necessary, book specialty clinic follow-up appointment					✓										
5	**CCAC**															
a	CCAC shares information, where available, about patient's existing community services	✓	✓	✓	✓											
b	Engage CCAC (e.g., bullet rounds) [M&E]	✓	✓	✓	✓	✓										
c	If necessary, schedule post-discharge care	✓	✓	✓	✓	✓										
6	**Communication**															
a	Provide patient, community pharmacy, PCP, and formal caregiver (family, LTCH, CCAC) with copy of Discharge Summary Plan/Note, Medication Reconciliation Form and contact information of attending hospital physician and inpatient unit [M&E]					✓										
7	**Patient Education**															
a	Patient performs Teach Back (see Patient Teaching for tips) to clinical team	✓	✓	✓	✓	✓										
b	Explain to patient how new medications relate to diagnosis	✓	✓	✓												
d	Thoroughly explain discharge summary to patient (use Teach Back if needed)					✓										
e	Explain potential symptoms, what to expect while at home and under what circumstances patient should visit ED					✓										

Service provisions

Primary Care

Identifying if a Patient has a Primary Care Physician

The below Process Map, provided by Providence Healthcare, can be easily applied to any health care facility to determine if a patient has a primary care physician for discharge follow-up.

Determining Providence Patients have a Family Doctor for Discharge Follow-up
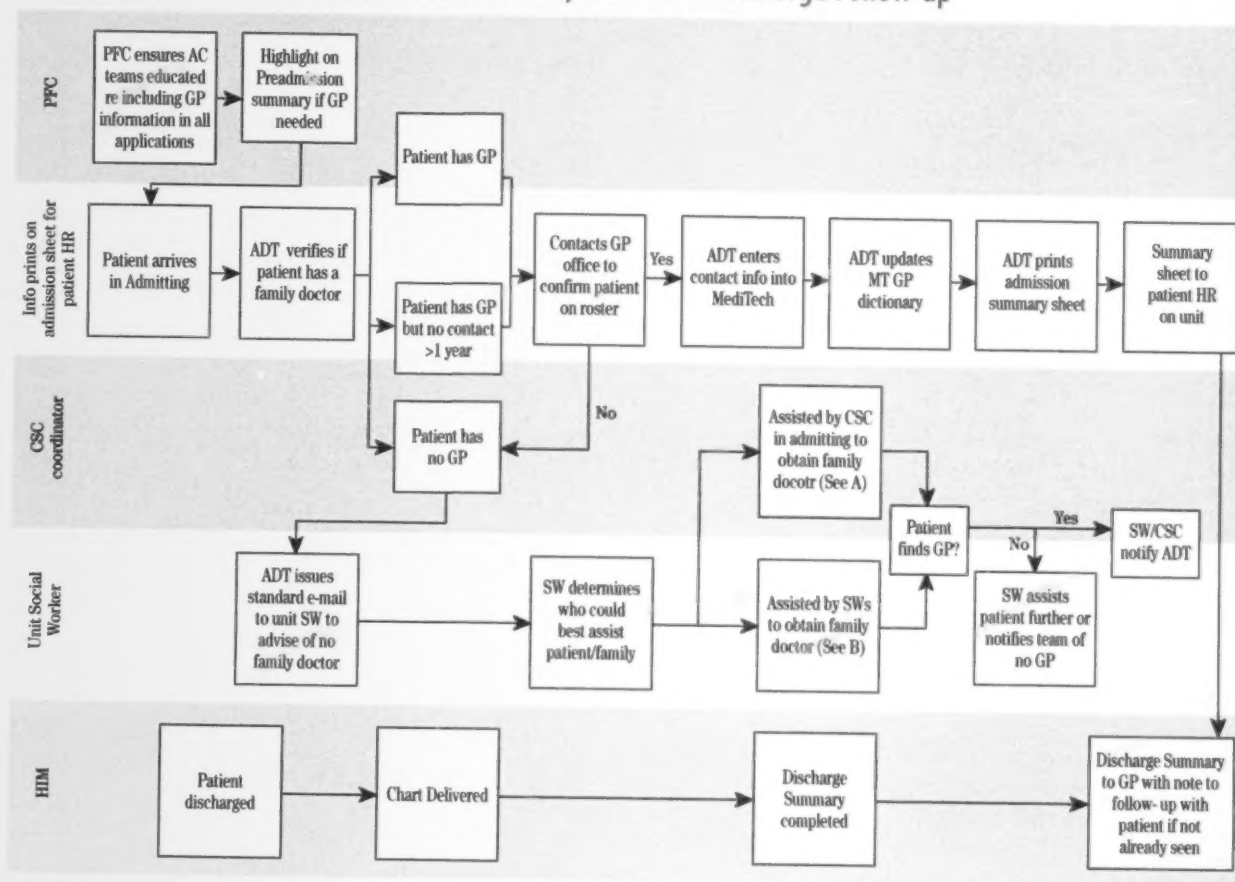
Provided by Providence Healthcare

Health Care Connect

Health Care Connect is a provincial program that helps Ontarians who are without a family health care provider to find one. People without a family health care provider are referred to a family doctor or a nurse practitioner who is accepting new patients in their community. Patients may consider registering if:

- they are actively looking for a regular provider for ongoing family health care needs;
- they have a valid OHIP card (or are eligible for health coverage in Ontario); and
- they are not currently enrolled with a family health care provider according to Ministry of Health and Long-Term Care records (i.e., have not signed a ministry enrolment and consent form).

Frequently Asked Questions

Visit Health Care Connect: http://www.health.gov.on.ca/en/ms/healthcareconnect/public/

Primary Care Physician Fee Code
New Fee Codes

A new fee code for a primary care visit after hospital discharge was introduced to the Schedule of Benefits for Physicians Services on October 1, 2006. Paediatricians may claim this fee code for patients when they are the patient's primary care physician.

E080: First visit by primary care physician after hospital discharge premium, add $25.00

For Payment rules and more information, visit:
http://www.health.gov.on.ca/english/providers/program/ohip/bulletins/4000/bul4439.pdf

LACE Index: Readmission Prediction Tool

The LACE Index is an easy-to-use tool that predicts the risk of death or unplanned readmission of cognitively intact medical or surgical patients after discharge from the hospital to the community. Key factors associated with these events are length of stay (L), acuity of admission (A), patient comorbidity (C) and number of visits to the emergency room (E).

On day of discharge, Charge Nurse (or Team Lead) takes 3-5 minutes to review patient's chart to complete LACE Index Score Card. Depending on the patient's LACE score, post-acute support is arranged accordingly.

LACE Score	Expected Probability, %
0	2.0
1	2.5
2	3.0
3	3.5
4	4.3
5	5.1
6	6.1
7	7.3
8	8.7
9	10.3
10	12.2
11	14.4
12	17.0
13	19.8
14	23.0
15	26.6
16	30.4
17	34.6
18	39.1
19	43.7

LACE Index Score Card

Attribute	Value	Point	Score
Length of stay in days	<1	0	
	1	1	
	2	2	
	3	3	
	4-6	4	
	7-13	5	
	≥14	7	
Acute Admission	Yes	3	
Comorbidity (Charlson comorbidity index score)	0	0	
	1	1	
	2	2	
	3	3	
	≥4	5	
ED visits in last 6 months	0	0	
	1	1	
	2	2	
	3	3	
	≥4	4	
Total			

Medication Safety

Best Possible Medication History (BPMH)

BPMH: A medication history obtained by a pharmacist or their designate which includes a thorough history of all regular medication use (prescribed and non-prescribed), using some or all of the following sources of information: patient or caregiver interview; inspection of vitals and other medication containers; review of a personal medication list; and/or follow-up with a community pharmacy or review of a current medication list printed by the community pharmacy.

Best Possible Medication Discharge Plan (BPMDP): Accounts for the medications that the patient was taking prior to admission (BPMH), the previous 24-hour medication administration record MAR, and any new medications planned to start upon discharge. The BPMDP should be communicated to the patient, community physician, community pharmacy and alternative care facility or service.

Using the BPMH and the last 24-hour MAR as references, create the BPMDP by evaluating and accounting for:

- new medications started in hospital
- discontinued medications (from BPMH) and adjusted medications (from BPMH)
- unchanged medications that are to be continued (from BPMH)
- medications held in hospital and new medications started upon discharge
- non-formulary/formulary adjustments made in hospital
- additional comments as appropriate (e.g., status of medications to be taken at patient's discretion)

Description provided by the Institute for Healthcare Improvement and the *Safer Healthcare Now!* Campaign

Medication Reconciliation

The ultimate goal of medication reconciliation is to prevent adverse drug events at all interfaces of care, for all patients. The aim is to eliminate undocumented intentional discrepancies and unintentional discrepancies by reconciling all medications, at all interfaces of care.

Medication Reconciliation is a formal process of:

1. Obtaining a complete and accurate list of each patient's current home medications – including name, dosage, frequency and route;
2. Using that list when writing admission, transfer and/or discharge medication orders, and
3. Comparing the list against the patient's admission, transfer, and/or discharge orders, identifying and bringing any discrepancies to the attention of the prescriber and, if appropriate, making changes to the orders. Any resulting changes in orders are documented.

Medication errors that can be prevented by reconciling medications may include but not be limited to, inadvertent omission of needed home medications, failure to restart home medications following transfer and discharge, duplicate therapy at discharge (the result of brand/generic combinations or formulary substitutions), and errors associated with orders having incorrect doses or dosage forms.

Description provided by the Institute for Healthcare Improvement and the *Safer Healthcare Now!* Campaign.

Follow-up

Follow-up Phone Call

Moderate-risk and high-risk patients: Prior to discharge, schedule follow-up phone call within 7 days of patient's hospital discharge:

- call can be conducted by various care providers, such as nurse who cared for the patient, physician, staff at a call centre, case manager, etc.
- during the calls, verify (using Teach Back) that:
  - The patient recalls why, when, and how to recognize worsening symptoms and when and whom to call for help;
  - The patient will keep the physician appointment; and
  - The patient understands how and when to take medications and other critical elements of self-care.

If necessary, schedule an office visit within 3 to 5 days after discharge; verify with the patient and family that transportation is arranged for the appointment.

Description provided by Institute for Healthcare Improvement:
Nielsen GA, Rutherford P, Taylor J. *How-to Guide: Creating an Ideal Transition Home.* Cambridge, MA: Institute for Healthcare Improvement; 2009. Available at http://www.ihi.org

Communication

Medication Reconciliation Form

Hospital discharge is a critical interface of care where patients are at a high risk of medication discrepancies as they transition out of the hospital. The goal of discharge medication reconciliation is to reconcile the medications the patient is taking prior to admission and those initiated in hospital, with the medications they should be taking post-discharge to ensure all changes are intentional and that discrepancies are resolved prior to discharge. This should result in avoidance of therapeutic duplications, omissions, unnecessary medications and confusion.

Discharge medication reconciliation clarifies the medications the patient should be taking post-discharge by reviewing:

- Medications the patient was taking prior to admission (BPMH)
- Previous 24-hour MAR (Medication Administration Record)
- New medications planned to start upon discharge

A discharge medication reconciliation form may be developed similar to the admission medication reconciliation form. The result of discharge reconciliation should be clear and comprehensive information for the patient and other care.

Description provided by the Institute for Healthcare Improvement and the *Safer Healthcare Now!* Campaign.

Patient Education

Teach Back

Teach Back involves asking the patient or family caregiver to recall and restate (in their own words) what they thought they heard during education or other instructions. Asking patients to recall and restate what they have been told is an important patient safety practice. To use Teach Back:

- explain needed information to the patient or family caregiver and then ask in a non-shaming way for the individual to explain in his or her own words what was understood
- if a gap in understanding is identified, offer additional teaching or explanation
- assess the patient's ability and confidence to perform intended self-care, including use of medications; diet; symptom awareness and management; ability to fill prescriptions; and reasons to call the physician (e.g., pain, weight gain, difficulty breathing)
- use multiple opportunities while the patient is in the hospital for review of important information to increase patient and family recall and confidence
- check for understanding using Teach Back after each segment or portion of the information. For example, conduct Teach Back after telling the patient how to take his/her "water pill" and again after explaining the reasons to call the doctor.

Description provided by Institute for Healthcare Improvement:
Nielsen GA, Rutherford P, Taylor J. *How-to Guide: Creating an Ideal Transition Home.* Cambridge, MA: Institute for Healthcare Improvement; 2009. Available at http://www.ihi.org

Patient Teaching

Facilitate patient teaching using the following guidelines:

- use plain language, breaking content into smaller, easy-to-learn parts.
  - Plain Language Association International: www.plainlanguagenetwork.org
  - Clear Language Group: www.clearlanguagegroup.com
- slow down when speaking to the patient and family, and break messages into short statements. Use easy-to-learn segments of critical information to help patients and family caregivers master the learning more easily.
- if written materials are used, highlight or circle key information.
- "Ask Me 3" is another useful patient communication and education tool that helps staff to teach patients:
  1. what the main problem is
  2. what the patient should do for that problem
  3. why the action is important.

Ask Me 3 also encourages patients to advocate to get this information about their care.

Description provided by Institute for Healthcare:
Nielsen GA, Rutherford P, Taylor J. *How-to Guide: Creating an Ideal Transition Home.* Cambridge, MA: Institute for Healthcare Improvement; 2009. Available at http://www.ihi.org

Appendix 4.   Measures and Evaluation

Measures included in recommendations:

Hospital

1a. Length of stay in acute care. This is recommended as a balancing monitoring measure to ensure that stays are not abbreviated or elongated and to enable assessment of relationship between LOS and readmissions. There is no performance target associated with LOS [Acute]

Primary Care

2a. Health Care Connect linkage for unattached patients. It is recommended that all patients who report not having a PCP are enrolled in health care connect [Acute]

2b. Primary care visit within 7 days for high-risk patients [Acute, PCP]; primary care visit within 14 days for low-risk patients [Acute, PCP]

Medication Safety

3a. Full medication reconciliation completed prior to discharge from acute [Acute]

3c. Medication Reconciliation (Pharmacy MedsCheck) billing within 14 days [Pharmacy]

CCAC

5b. Time from referral to CCAC to acute discharge. It is recommended that all CCAC referrals occur at least 48 hours prior to discharge for all high-risk* patients [Acute];

Time from referral to CCAC assessment with RAI-Contact Assessment for patients referred to home care (only for home discharges). It is recommended that RAI-CA assessments be completed within 24 hours after referral for all high-risk patients [CCAC]

Time from discharge to first CCAC nursing visit for high-risk patients [CCAC]. It is recommended that CCAC ensure a nursing visit in home within 3 days of acute discharge (preferably earlier) for all high-risk patients. This nursing visit should include a review of patient medications to identify potential risks.

Communication

6a. Discharge Summary Provided to Patient, including full list of medications and follow-up appointments [Acute]

6b. Discharge Summary Provided to Physician, including full list of medications and follow-up appointments [Acute]

6c. Discharge Medication List Provided to Pharmacy, including full list of medications and follow-up appointments [Acute]

6d. Patient provided information on who to contact and use of medications (communication of discharge plan to patient) [Acute][2]
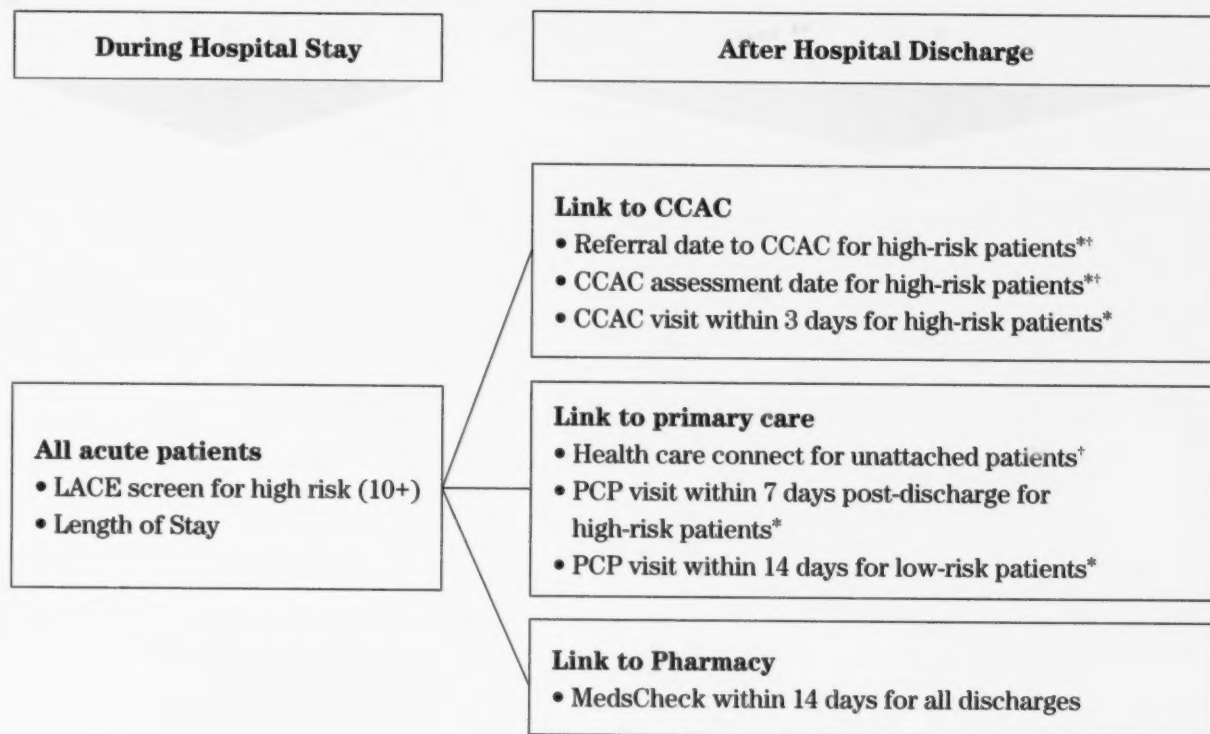
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[2] Included in existing NRC Picker Patients Satisfaction Tool – Appendix 1.

Evaluation Recommendations

1. Tracking of intervention components should at a minimum include factors associated with each of the performance measures. A quality improvement plan template that included these elements would facilitate this data capture.

2. Performance reports include an analysis of the observed relationship between process performance measures and the readmission outcome measure.

3. Feedback of status or ongoing operational reports should be provided to all relevant stakeholders (LHIN, CCAC, hospital, pharmacy, and physician).

Performance Measures for Acute Patients Discharged to Community

During Hospital Stay	After Hospital Discharge

Link to CCAC
- Referral date to CCAC for high-risk patients[*†]
- CCAC assessment date for high-risk patients[*†]
- CCAC visit within 3 days for high-risk patients[*]

All acute patients
- LACE screen for high risk (10+)
- Length of Stay

Link to primary care
- Health care connect for unattached patients[†]
- PCP visit within 7 days post-discharge for high-risk patients[*]
- PCP visit within 14 days for low-risk patients[*]

Link to Pharmacy
- MedsCheck within 14 days for all discharges

* LACE screen not measured but used in calculation of subsequent risk-stratified measures
† Indicates service provision measures from best practice guidance working group

Appendix 5.   References

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